DOCUMENT RESUME

ED 240 267 CE 038 049

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TITLE Linkage of Vocational Education and Related Service Deliverers.

INSTITUTION Ohio State Univ., Columbus. National Center for Research in Vocational Education.

SPONS AGENCY Office of Vocational and Adult Education (ED), Washington, DC.
PUB DATE Jan 84
CONTRACT 300-83-0016
NOTE 186p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC08 Plus Postage.
DESCRIPTORS *Agency Cooperation; *Articulation (Education); Cooperative Planning; *Coordination; *Educational Cooperation; Educational Research; Human Services; Models; Postsecondary Education; Secondary Education; *Vocational Education
IDENTIFIERS *Linkage

ABSTRACT

A study reviewed research on interagency relations involving vocational education and examined a local vocational agency and some of its linkages. It also determined what further research is needed to facilitate mutually advantageous interagency arrangements. The study used a dyadic perspective. An analytic model of interorganizational behavior, the Van de Ven model, was selected from the theoretical literature and used to analyze published reports of interorganizational relationships (IORs) and to design and conduct the field site study. The field site study focused on North Central Technical College in Mansfield, Ohio and its collaborative relationships with a secondary vocational school, regional medical facility, and an economic development consortium with emphasis on training. The application of the theoretical model to the three field site dyadic relationships supported the viability and usefulness of the model. The model was useful as a tool for understanding interorganizational causes and effects in all three cases. Factors found to be important in IORs included resource incentives, interdependency, commitment, a positive climate, and coordination. (Appendixes include the data framework for the field study, data summaries, and a supporting statement on interagency cooperation between vocational education and other state agencies.) (YLB)

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LINKAGE OF VOCATIONAL EDUCATION AND RELATED SERVICE DELIVERERS

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January 1984

CE038049

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FUNDING INFORMATION

Project Title:	National Center for Research in Vocational Education, Applied Research and Development
Contract Number:	300830016
Project Number:	051MH30001
Act under Which Funds Administered:	Education Amendments of 1976, P.L. 94-482
Source of Contract:	U.S. Department of Education Office of Vocational and Adult Education Washington, D.C. 20202
Contractor:	The National Center for Research in Vocational Education The Ohio State University Columbus, Ohio 43210
Executive Director:	Robert E. Taylor
Disclaimer:	This publication was prepared pursuant to a contract with the Office of Vocational and Adult Education, U.S. Department of Education. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgement in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official U.S. Department of Education position or policy.
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TABLE OF CONTENTS

	Page
FOREWORD	v
EXECUTIVE SUMMARY	vii
I. INTRODUCTION	1
Background and Purpose	1
Interorganizational Analysis Framework	3
Description of the Basic Model	3
Modifications to the Basic Model	5
Study Focus and Methodology	7
Organization of this Report	11
II. APPLICATION OF THE IOR FRAMEWORK	13
Description of Dyads	13
Focal Organization: North Central Technical College (NCTC)	13
Mansfield General Hospital and North Central Technical College	14
Pioneer Joint Vocational School and North Central Technical College	15
Mid-Ohio Consortium for Industrial Training and North Central Technical College	17
Analysis of Institutional Relationships	18
Situational Factors	18
Structural Dimensions	30
Process Dimensions	34
Outcome Dimensions	38
III. CONCLUSIONS	43
Usefulness of the Analysis Framework	43
Implications for Practice and Research	46
Practical Importance of Situational Factors	46
Implications for Higher Level-Agencies	47
Role of Resource Incentives	48
Dependency vs. Interdependency	48
Economies of IOR	48
Role of Commitment	49
Positive Climate	49
Coordination vs. Diversity	49
A Potpourri of Practical Suggestions	50
Needs for Further Research	51

Page

REFERENCES 53

APPENDIX A. DATA FRAMEWORK FOR FIELD STUDY AND DATA SUMMARIES 57

APPENDIX B. FEDAC SUBMISSION: SUPPORTING STATEMENT TO SF 83 ON "INTERAGENCY COOPERATION BETWEEN VOCATIONAL EDUCATION AND OTHER STATE AGENCIES" 119

FOREWORD

Access to vocational education and related services by persons of diverse backgrounds and needs calls for interagency coordination and cooperation. The need for coordination becomes more urgent in times of resource scarcity, when improved efficiency of the delivery system is increasingly demanded. The record of efforts between vocational education and other agencies to better coordinate their activities and share their resources is not totally clear. In many cases, it appears that efforts to establish closer ties have not been sufficiently guided by knowledge of the conditions that have been found to be necessary for the success of interagency relations in general.

The study reported here was conducted to review research on interagency relations involving vocational education, to study a local vocational agency and some of its linkages, and to determine what further research is needed to better understand and facilitate mutually advantageous interagency arrangements. An analytic framework was drawn from the field of interorganizational theory and was used as a guide both in collecting data from the field site and in examining the literature. It is hoped that the study findings contained in this report will be particularly useful for state-level planners and policymakers with responsibilities for vocational education and human resource development, as well as for researchers.

The National Center's Evaluation and Policy Division, under the direction of N. L. McCaslin, Associate Director, conducted the study reported here. Funding was provided by the U.S. Department of Education, Office of Vocational and Adult Education. We are much indebted to administrators and staff of the North Central Technical College, Mansfield General Hospital, Pioneer Joint Vocational School, and the Mid-Ohio Consortium for Industrial Training--all of Mansfield, Ohio--for helping us to understand what makes their linkages mutually beneficial and what it takes to keep them viable. We greatly appreciate the contributions of those who served the project as technical consultants and reviewers of the draft report and wish to thank Harold W. Beder, Rutgers University; David S. Bushnell, George Mason University; Carolyn S. Cates, Far West Laboratory for Educational Research and Development; Virginia C. Clay, Mid-Ohio Consortium for Industrial Training; and Warren H. Groff, North Central Technical College. We also thank Gale Zahniser of the National Center for her review of the draft report.

Finally, we wish to thank Frank C. Pratzner, the study's director; Allen Wiant and Catharine Warmbrod, authors of this

report, and Deborah Anthony for typing the numerous drafts and revisions that were required for the report.

Robert E. Taylor
Executive Director
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in Vocational Education

EXECUTIVE SUMMARY

Current education and training legislation, research, and position papers stress the need for articulation and coordination. While there is a general consensus on the need to develop more coordinated relationships between vocational education and related service deliverers, little attention has been given to devising systematic interventions, strategies, or techniques to bring about this desired end. In general, research studies and reports to date have been mainly idiosyncratic; they have not employed a common analytic framework, nor are they based on organizational theory. To fill this void, this study was undertaken to provide a foundation for further research on the relationship between vocational education and related service deliverers. Specific objectives were (1) to describe the potential for creating and sustaining interorganizational arrangements between vocational education agencies and selected related service deliverers and (2) to describe current activities and relationships that link vocational education and those selected other agencies.

A dyadic perspective, in which the relationship between a pair of organizations is considered, was used in this study since the dyad is the basic unit of analysis. An analytic model of interorganizational behavior was selected from the theoretical literature and used to analyze published reports of interorganizational relationships (IORs) and then to design and conduct the field site study.

The report is expected to be of value to state-level planners and policymakers with responsibilities for vocational education and human resource development. This document is not a "how-to-do-it" guidebook; however, it does present a comprehensive framework for interorganizational relationships that has been applied to a focal vocational-technical education organization and three of its related service providers. The report is designed to create awareness and understanding important to both researchers and practitioners. It provides a foundation upon which further research can be built.

The basis for the model selected was that proposed by Andrew Van de Ven in 1976 to explain "how and why relationships among two or more human service organizations voluntarily emerge, and how they function over time" (p. 25). The Van de Ven model was modified to include the aspects of structural and procedural conflict and to highlight the importance of mutual benefit. The modified model consists of four major sets of dimensions: situational, structural, process and outcome. Situational factors explain why IORs develop. They include resource interdependence or mutual benefit, commitment to resolve environmental needs or realize opportunities, awareness of environmental needs and of other agencies and their representatives, and consensus on solutions to problems and on the services and goals of each agency.

Established IORs have both structural and procedural dimensions. Structural dimensions refer to the administrative arrangements established to define the role relationships of the members of the IOR. These include formalization (the degree to which rules, policies, and procedures govern the relationship and contacts), centralization (the locus of decision making), complexity (the number of project and task linkages), and conflict (structural incompatibility).

Process dimensions refer to the flow of activities that characterizes the IOR. It is the activities or processes of an IOR that indicate whether or not the IOR is functioning. Process dimensions include resource flows (units of value transacted between agencies), information flows (the intensity and direction of written and oral communication), and conflict (procedural differences).

An IOR may function well in terms of structure and processes and still fail if it is not perceived to be worthwhile. Hence the model has two outcome dimensions: effectiveness and impact. Commitments must be carried out and the members must believe that the relationship is worthwhile, equitable, productive, and satisfying. Benefits must exceed costs. Impact is indicated by changes in internal operations.

The field-site study of IORs focused on North Central Technical College of Mansfield, Ohio, and its collaborative relationships with Mansfield General Hospital, Pioneer Joint Vocational School, and the Mid-Ohio Consortium for Industrial Training. This site offered examples of linkage between a post-secondary vocational-technical service provider and a regional medical facility, a secondary vocational school, and an economic development consortium. This college was selected as the focal organization in the study because of its reputation for active outreach to other organizations in the community. One of the college's hallmarks is its excellent system for strategic institutional planning and one of the college's formal goals deals with establishing functional relationships with outside organizations. Today the college has collaborative relationships with over seventy organizations and institutions.

The application of the theoretical model to the three field site dyadic relationships supported the viability and usefulness of the model. The model was useful as a tool for understanding interorganizational causes and effects in all three cases. No important dimensions appeared to be missing, although it is suggested that to capture the dynamics of change, a longitudinal study would be beneficial. One significant contribution of this study is the understanding it provides of relationships between vocational education and related service delivery agencies, based upon a theoretical model of IORs.

A summary of findings and tentative conclusions follows, along with implications for practice and research:

1. The situational conditions of resource interdependence or mutual benefit, commitment, awareness, and consensus are necessary for IORs to develop and be sustained. Thus, policymakers and agency heads should not expect sound IORs on the basis of good intentions or mandates alone.

2. State-level agencies can encourage and facilitate local-level interorganizational resource sharing through various means, such as recognizing and supporting the cooperative leadership of institutional staff, providing financial incentives, and applying political and public persuasion.

3. State agencies can also facilitate local cooperation by jointly addressing state-level disincentives posed by such factors as incompatible funding cycles, reporting requirements, and evaluation criteria.

4. Interagency arrangements should be based on mutual benefits, the acceptance of which do not require a great shift in the locus of power and control.

5. A systematic national collection of data on vocational education IORs using a theoretical interorganizational framework for analysis and interpretation is necessary for more complete understanding of such relationships and how to further their development.

6. Further studies are needed to examine the evolution of interorganizational relationships involving vocational education agencies to better understand their maturation processes, since IORs exist at various levels of intensity and stages of maturity.

7. Commitment is the single most important requirement for IORs, but it is dependent upon potential benefits, shared beliefs concerning the solution to mutual problems and opportunities, and a high level of mutual trust and respect between the principals in the relationship.

8. An organization considering an IOR should first identify its resource needs and then look to organizations with complementary needs as partners. Reciprocal benefit is best attained when organizations have complementary resource needs.

9. Solid linkage develops when all levels and elements of the linking organization are able to intermesh with little dislocation. If linkage is only at the top while the secondary and tertiary levels find it difficult to work together, the relationship is not likely to continue.

10. Some conflict is inevitable. Procedures for handling and resolving conflicts should be established in advance.

The theoretical interorganizational framework applied to vocational education organizations and related service providers in this study has been demonstrated to be a useful tool in analyzing and understanding interorganizational relationships in this milieu. The findings from the application of this framework to published IOR reports in the literature and to a field-site study involving three dyadic IORs give insight and information to others responsible for fostering or implementing such endeavors.

I. INTRODUCTION

Background and Purpose

The employment and training community is a complex and heterogeneous enterprise including a variety of agents and agencies and characterized by overlapping interests, activities, and functions. All participants are becoming increasingly aware of the need to coordinate and articulate those shared interests, functions, and activities in order to guide and aid young and adult workers more effectively as they move from education and training to employment. Current education and training legislation, research, and position papers stress the need for articulation and coordination. The National Society for the Study of Education, for example, has recently stated that

> problems of coordination exist along many dimensions. One line of fragmentation cuts across levels of government, with very loose coupling between federal, state, and local organizations. . . . Other lines of fracture cut across types of schools. . . . along management lines. . . . and along curricular lines. Whether interorganizational agreements are able to mend these various splits is questionable, but most policy-makers agree that the effective development of vocational skills in both young and adult members of our society cannot succeed through the lone efforts of the public schools. The very nature of the task requires the cooperative efforts of employers, unions, government, education, and other community-based organizations, each performing what it does best. The requirement is especially salient in the face of scarce resources and an attitude among legislators that waste and inefficiency exist in publicly supported programs at all levels. (Silberman 1982, p. 278)*

However, while there is a general consensus on the need to develop more coordinated relationships between vocational education and related service deliverers, only modest attention has yet been paid to devising systematic, powerful interventions, strategies, or techniques to bring about this desired end. Thus, while many authors have reported instances of cooperation and coordination between vocational education and other agencies, this body of reporting has been of limited value as research because of the idiosyncratic nature of each case reported and the difficulty of relating findings to differing circumstances. In general, these reports have employed neither a common analytic framework nor one that is based on organizational theory.

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The general objective of this study was to establish a basis for further research into the relationship between vocational education and related service deliverers. A conceptual framework from the field of interorganizational theory was used in the analysis. Specific objectives were: (1) to describe the potential for creating and sustaining interorganizational arrangements between vocational education agencies and selected related service deliverers and (2) to describe current activities and relationships that link vocational education and these selected other agencies.

The conceptual framework selected to undergird and guide the procedural components of this study is an interorganizational one. The rationale for adopting such a conceptualization is based on the observation that despite the variety of programs, participants, agencies, and levels that constitute vocational education, all vocational education activities emanate from organizational rather than individual contexts. This framework allowed attention to multiple linking arrangements within a common structure while attending to those variable categories likely to be most powerful in affecting linkage.

Interorganizational arrangements may be studied from a number of perspectives. They may be viewed, for example, as dyads, organization-sets, or networks. The dyad is the basic unit of analysis in interorganizational relationships. A dyadic perspective is one in which the relationship between a pair of organizations is considered, regardless of other organizations with which each of them may also have relationships. The organization-set and network perspectives are more comprehensive. An organization-set consists of those organizations with which a focal organization has direct links, while an interorganizational network consists of all organizations linked by a specified type of relation (Aldrich and Whetten 1981). Since the focus of this study was on the relationship between vocational education and related service deliverers viewed individually, a dyadic perspective was adopted.

This report is expected to be of value to state-level planners and policymakers with responsibilities for vocational education and human resource development. It is important that persons with such responsibilities understand the various dimensions of effective interorganizational relationships so that as they undertake to establish such linkages they know what conditions are essential and what factors cause problems. The same is true of those drafting legislation or establishing requirements to mandate articulation and cooperation between vocational education and related service deliverers. As persons at the operational level then become involved in implementing cooperative relationships with other organizations, an awareness on their part of the critical elements needed for successful relationships will facilitate the process.

This document is not a "how-to-do-it" guidebook; however, it does present a comprehensive framework for interorganizational relationships that has been tested with a focal vocational-technical organization and three of its related service providers. The report is designed to create awareness and understanding important both to researchers and practitioners. It provides a foundation upon which further research can be built.

Interorganizational Analysis Framework

Research activity in interorganizational relations (IORs) has arisen chiefly as an extension of the interest of management scientists in organizational behavior. Much of the research undertaken has been performed in the context of the delivery of social services by semiautonomous public agencies, the objective being to improve services to clients and to reduce redundancy and inefficiency.

Primarily during the 1960s, prominent sociologists contributed insights to the understanding of interorganizational behavior that became benchmarks for subsequent inquiry. These investigators included such well-known names as Levine and White (1961), Litwak and Hylton (1962), Guetzkow (1966), and Aiken and Hage (1968). By the end of the decade, the variety of approaches already taken called for synthesis as well as explication. Marrett's (1971) well-received synthesis attempted "to define and provide measurable indicators of dimensions along which interorganizational relations may be studied and to propose the likely associations among the dimensions" (p. 83). Marrett also organized, categorized, and related previous conceptual contributions to the field of IOR. Research interest in IORs continued during the 1970s, and included efforts to define an overall, systematic framework for interoganizational analysis. Van de Ven reviewed the state of the art of such frameworks in 1974, and included the "relational dimensions" of Marrett (Van de Ven, Emmett, and Koenig 1974). In 1976, Van de Ven published an article in which he proposed a model "for explaining how and why relationships among two or more human service organizations voluntarily emerge, and how they function over time" (p. 25). The model was subsequently tested using data collected in a large-scale study of early childhood organizations in local Texas communities. The author stated that the dimensions of the model "represent a synthesis of the concepts frequently examined in interoganizational studies" (Van de Ven, Walker, and Liston 1979, p. 23).

Description of the Basic Model

A description of the Van de Ven model follows, with brief definitions of each of its dimensions. The model consists of four major sets of dimensions:

- o Situational
- o Structural
- o Process
- o Outcome

Situational factors explain why IORs develop. Included are the following:

- o Resource dependence--an agency's need for external resources and/or other agencies in its environment
- o Commitment to an external problem or opportunity--perceived dedication to resolve environmental problems or realize opportunities
- o Awareness--knowledge of environmental needs, problems, or opportunities; knowledge of other agencies' goals and services; personal acquaintance of agency representatives
- o Consensus--agreement among agencies on solutions to environmental needs or problems and services and goals of each

Either resource dependence or commitment to an external problem/opportunity is required for an IOR to occur. In the former situation (resource dependence model), the stimulus for an IOR arises from within the organization; in the latter (system change model), it comes from without (infusion of money from a resource-granting agency, redistribution of resource allocation channels, or other external intervention). In some situations, both elements are present. In any case, however, awareness and consensus (as defined above) should also be present. Another situational element, domain similarity, is not a requirement, as are the other situational factors, but is regarded as an indicator of the kinds of agencies likely to become joined in IORs. Domain similarity is defined in terms of the sameness of the goals, services, staff skills, and clients of the agencies. Domain similarity may either help or hinder the development of IORs, depending on other factors.

Once established, IORs generally have both structural and procedural dimensions. Structural dimensions refer to the administrative arrangements established to define the role relationships of the members in an IOR. Structural dimensions include the following:

- o Formalization--the degree to which rules, policies, and procedures govern both the inter agency agreement and contracts

- o Centralization--the locus of decision making; the degree of inclusive or concerted decision making by member agency representatives

- o Complexity--number of differentiated elements, agencies, projects, tasks) that must be contended with and integrated in order for the IOR to function; for dyadic relations, this reduces to "multiplexity" (the number of linkages connecting the two agencies)

Process dimensions refer to the flow of activities that characterize the IOR. Structural arrangements should lead to such activities, but sometimes they do not. Hence it is not the structural dimensions but the activities or processes of an IOR that indicate whether or not the IOR is functioning. Process dimensions include the following:

- o Resource flows--units of value transacted between agencies (e.g., money, facilities, materials, customer/client referrals, technical staff services)

- o Information flows--communication, whether written or oral, formal or informal

Resource flows and information flows have both intensity and direction.

Finally, an IOR may function well in terms of its structure and processes and still fail if it is not perceived to be worthwhile. Hence the model has two outcome dimensions:

- o Effectiveness of the relationship--the extent to which the members carry out their commit ments and believe that their relationships are worthwhile, equitable, productive, and satisfying.

- o Impact--the extent to which the member organizations are perceived to change or affect the internal opera tions of another.

Modifications to the Basic Model

Although Van de Ven's is basically an eclectic model, there has been some criticism of it on the grounds that it fails to give adequate recognition to the element of conflict in IORs. This "procoordination perspective" is discussed by Rogers and Whetten (1982) in part as follows:

> . . . the field as a whole has been dominated by a structural-functional orientation inherited from sociology. This has directed the attention of researchers to study such questions as: How can we increase coordination and cooperation? How can we

eliminate conflict? How can we promote a consensus regarding the domains of the respective organizations? This inclination is typified by Van de Ven et al. . . .

> This view of an interorganizational system assumes that organizations voluntarily elect to form a union to accomplish a mutually preferred objective, one that is unattainable through the independent actions of the members. Consequently members make consensual decisions through discussion and persuasion regarding the internal division of responsibilities within the emerging system. The resulting functionally derived interdependencies serve organizations as the basis for resource exchanges that are intended to produce the maximum benefit for the system as a whole.
>
> This perspective pays little attention to issues of coercion, force, bargaining, conflict of interests, and dissension among members of the system. Instead these are treated as temporary aberrations created by simple disagreements and misunderstandings. . . .
>
> Our society as a whole places a strong emphasis on compatibility, consensus, and unity. Therefore, research in this area may simply reflect the broader societal values. It is very difficult to study a socially undesirable phenomenon. Therefore it may be that researchers have simply followed the path of least resistance and studied coordination and consensus since they are highly valued, rather than pursuing the more risky alternative of trying to collect data on the presence, determinants, and value of conflict. (pp. 98-100)*

Molnar and Rogers (1979), in a study of conflict, found significant correlation between interdependence and structural conflict and between structural and operating conflict. Structural conflicts are those that occur over the "basic identities and responsibilities that define a relationship, and reflect an inability to establish or maintain the basic rules that govern the relationship. . . . Operating conflicts reflect the continual process of mutual adjustment between interacting organizations" (p. 408). Given these definitions, it appears that structural and operating conflict can be added to the basic model as structural and procedural dimensions, respectively.

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Unlike the procoordination view of Van de Ven and others, Benson (1975) has offered a paradigm for studying IORs based on a view of society in which organizations compete for power and resources. Benson hypothesized that a stable IOR is characterized by four dimensions in balance. These dimensions are domain consensus, ideological consensus, positive evaluation, and work coordination. Three of these four dimensions are contained in the Van de Ven model in one form or another. The concept of positive evaluation, however, while not totally lacking in the Van de Ven model, has a much weaker counterpart. Benson's positive evaluation, or mutual respect, is "the judgment by workers in one organization of the value of the work of another organization" (p. 235). This seems to go well beyond awareness, which is the most closely related concept of the Van de Ven model. Cases may be cited where awareness existed but the IOR was inhibited owing to lack of mutual evaluation. Hence it may be appropriate to think of awareness as a continuum, the high end of which is mutual evaluation.

We have also modified the definition of the situational factor termed resource dependence because of its unilateral connotation. Unilateral dependence results in loss of power and control, which is something that organizations resist (Benson 1975). Prospects of mutual benefit (or reciprocal resource dependence) are more attractive and less threatening because they have greater potential for retention of autonomy and maintenance of the current locus of decision making. The concept of mutual benefit is supported by the resource exchange theory of Levine and White (1961).

The model used to guide this study is summarized in figure 1, with abbreviated definitions of each of its elements.

Study Focus and Methodology

The general approach taken in this study was to use the interorganizational model to analyze reported cases of coordination and to study IORs at a local field site.

The field study was intended to be conducted in the central Ohio area. In examining the dyadic interorganizational relationships between vocational education and related service providers in the central Ohio area, we were not able to identify ongoing relationships of significance to study between vocational education and private trade and vocational technical schools or between vocational education and rehabilitation agencies. However, closely related to these, we found an example of a dyadic relationship between a vocational education institution and a major medical facility used extensively as a clinical site for training, and another between postsecondary and secondary vocational education institutions. A third dyadic relationship

SITUATIONAL FACTORS

1. Resource Interdependence/Mutual Benefit

   Mutual need for external resources
   Complementary need for other agencies in the environment

2. Commitment

   Commitment to resolve environmental needs or realize opportunities

3. Awareness/Mutuality

   Knowledge of environmental needs/problems/opportunities
   Knowledge of services and goals of other agencies
   Personal acquaintance of agency representatives
   Mutually positive evaluation

4. Consensus

   Agreement on solutions to environmental needs/problems
   Agreement on services and clients

STRUCTURAL DIMENSIONS

1. Formalization

   Agreements
   Contacts

2. Centralization

   Locus of decision-making

3. Complexity

   Number of project and task linkages

4. Conflict

   Structural incompatibility

PROCESS DIMENSIONS

1. Resource Flows

   Intensity
   Reciprocity

2. Information Flows

   Intensity
   Reciprocity

3. Conflict

   Procedural differences

OUTCOME DIMENSIONS

1. Effectiveness

   Extent agencies carry out commitments and believe relationships are worthwhile, equitable, productive, and satisfying

2. Impact

   Change in internal operations

FIGURE 1. Causes and characteristics of interorganizational relations (adapted from Van de Ven 1976)

examined was that of vocational education and an economic development organization. The relationships in these three dyads form the basis of the field-site study.

An interview protocol for use in collecting data at the field site was constructed based upon the dimensions of the analysis framework depicted in figure 1. Interviews with key administrative and supervisory personnel were carried out over a two-day period. In some cases, additional follow-up information was obtained by telephone. (The form of the interview protocols, as well as a summary of the data collected for each of the three dyads, is contained in appendix A.) The field study of a local IOR was originally planned to supplement information obtainable from the literature and to provide verification of the conceptual ceptual model. Owing to the sparsity of findings in the literature, the importance of the local study for this report was greatly increased. As a result, it forms a major part of this report, with published findings and insights interspersed to aid in interpretation.

A number of databases were searched for reported instances of interorganizational coordination involving vocational education. These databases included the Educational Resources Information Center (ERIC), the National Technical Information Service (NTIS), and Dissertation Abstracts. Special attention was given to information relevant to the types of dyads represented at the field site. As previously indicated, however, very few instances were found in which the concepts of interorganizational theory were employed to examine or explain a reported relationship. A substantial number of arrangements between vocational education and CETA have been reported, but this relationship was not selected as one of the three dyadic relationships to be studied because of changes in national training policy, as exemplified by the Job Training Partnership Act, and the new interorganizational roles envisioned therein.

Two major sources of descriptive information found in the literature are cited frequently throughout this report because of their relevance to the field study and to the interorganizational concepts that undergird the entire report. One of these is a study of secondary and postsecondary arrangements in vocational education jointly sponsored by the American Association of Junior and Community Colleges (AACJC) and the American Vocational Association (AVA) and conducted in 1976-78.* Nominations of

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*This study has been reported as a whole and in part in several places. Two references are cited in this support. One of these is the project director's final report (Bushnell 1978); the other consists of a collection of conference papers by Bushnell, Fedderson and Loch, Nugent, Smith, and Eddy, on various linkages or aspects of the study (Bushnell et al. 1977).

exemplary relationships were initially solicited from state directors of vocational education and community colleges. From the 203 nominations received, a sample of 22 was drawn for in-depth study and five of these met the study's criteria of successful articulation. These five cases involve the following principal institutions and major characteristics:

1. Kellogg Community College and Calhoun Area Vocational Center of Battle Creek, Michigan--Calhoun was established as a result of strong local effort that emphasized coordination with the already existing community college.

2. Fulton-Montgomery Community College (Johnstown, New York) and the Board of Cooperative Educational Services (BOCES) of Hamilton-Fulton and Montgomery Counties--This relationship illustrates the incremental growth of institutional capacity resulting from a gradual increase in mutual trust and interdependency.

3. Williamsport Area Community College (Williamsport, Pennsylvania) and its linkages with seventeen high schools in ten rural counties--These linkages are well established, and WACC has a history of exemplary community service.

4. Bellevue Community College (Bellevue, Washington) and its cooperation with ten public school districts, two vocational-technical institutes, and three community colleges--BCC was established in 1967. A project to achieve curriculum articulation which was initiated with strong local leadership and state support, is described.

5. Milwaukee Area Technical College and its numerous linkages with secondary and postsecondary educational institutions and other training programs--MATC represents a very large and mature institution with a history of linkages encouraged by clear policy directions and linkage arrangements at the state level.

Another study frequently cited in this report is described by its authors as an ecological study, concerned with explaining and analyzing the adult occupational education delivery system as a whole (Beder and Darkenwald 1979). Data for the first part of the study were obtained from an intensive analysis of the roles of and relationships between institutional providers of adult occupational education in four New Jersey counties. Findings from this local study were then tested and augmented by a national survey of state-level decision makers concerned directly with adult occupational education.

Organization of this Report

The preceding introduction has presented the purposes of the study and given a brief definition and explanation of the analytical framework that was employed. In the following chapter, the dimensions of this framework are used in the analysis of interorganizational relationships at a field site and to explain and illustrate the field site findings from similar interorganizational relationships reported in the literature.

Concluding implications for practice and research are presented in the final chapter, as well as observations concerning the usefulness of the framework.

II. APPLICATION OF THE IOR FRAMEWORK

Description of Dyads

The field-site study of interorganizational relationships focused on North Central Technical College in Mansfield, Ohio, and its collaborative relationships with Mansfield General Hospital, Pioneer Joint Vocational School, and the Mid-Ohio Consortium for Industrial Training. This provided a study of linkage between a postsecondary vocational-technical service provider and a secondary vocational school, a regional medical facility, and an economic development consortium with emphasis on training.

Focal Organization: North Central Technical College (NCTC)

North Central Technical College was selected as the focal organization in this study because of its reputation for active outreach to other organizations in the community. One of the College's hallmarks is its excellent system for strategic institutional planning. This system puts emphasis on the external environment of the institution, and one of the college's goals is to establish functional relationships with outside organizations. Today the college has collaborative relationships with over seventy organizations and institutions.

The college was formed in 1961 and in 1968 became one of the state-assisted two-year colleges under the Ohio Board of Regents. It received seven years of accreditation from the North Central Association of Colleges and Schools in 1980.

The college is directed by a board of trustees consisting of nine persons, three of whom are appointed by the governor and six of whom are elected by school boards representing the service district of Ashland, Crawford, and Richland Counties. NCTC shares a campus with the Ohio State University at Mansfield.

NCTC's stated purposes include providing programs and courses that serve the educational needs of the community and to offer associate degree and certificate programs that meet various job requirements. Other purposes stress the development of agreements with other educational and community organizations. The college provides opportunities for lifelong learning, as well as a public education resource in the training of technicians for business and industry.

Mansfield General Hospital and North Central Technical College

Of great educational importance to NCTC are its cooperative relationships with Mansfield General Hospital (MGH). It is at Mansfield General Hospital that students in four technologies at NCTC receive their clinical training. This is also of great importance to the hospital, which is dependent upon the college as a source of well-trained personnel. As the major medical facility in north-Central Ohio, the hospital plays a significant health care role in that area.

For over eighty years, Mansfield General Hospital has been serving a six-county area (with a current population of over 250,000). It is a 408-bed medical center and is still growing. In a typical year, nearly 20,000 persons are admitted, 35,000 persons treated in emergency rooms, 7,500 operations performed, and 1,500 babies born. In addition, 800,000 laboratory tests are made annually and 65,000 X-ray examinations carried out.

All of this provides a fine clinical setting for health care training. The college uses MGH for clinical experience for two nursing programs, even though the hospital has its own three-year nursing program. NCTC needed MGH as a clinical training facility for its associate degree nursing program and initiated the request to MGH. The hospital was interested because it had a much lower turnover of NCTC-trained nurses than of those trained elsewhere. The first clinical training area established was pediatrics; the other clinical areas for training were soon added. The second program, licensed practical nursing, was taken over by the college from another organization in 1978, and NCTC continued to use MGH as the clinical facility for this program.

The respiratory therapy program began at the college in 1978. This is a one-year (four-quarter) certificate program. The program uses four clinical sites, Mansfield General Hospital being by far the largest. The head of the program serves as the clinical instructor at MGH, and there are other instructors for the clinical sites in Ashland, Ohio, and in Marion, Ohio. The respiratory therapy program takes in twenty-five students annually and about 60 percent of those graduate. Seventy-five percent of the respiratory therapy staff members at MGH are graduates of the NCTC program.

The radiological technology program was an MGH-based program that was transferred to the college in 1971. It is now a two-year associate degree program. There are two radiological technologists on the staff at the college. MGH pays the salary of one of these, although this person is an employee of the college. The American Society of Radiological Technologists requires a minimum of 2,400 hours of clinical instruction as a minimum, and limits the number of students in the program to

nine first-year students and nine second-year students. There are twenty-three registered radiological technologists on the staff at MGH. By providing the clinical experience, the hospital is able to select the best of the graduates as employees.

All four of the programs described are covered by formal written agreements between North Central Technical College and Mansfield General Hospital. Such written agreements are required by certifying agencies and reviewed annually.

Sharing of facilities, equipment, and personnel requires a close working relationship between the two institutions. Strong respect and high regard for the leadership and staff in both organizations were expressed by all parties. This close working relationship at many levels and in many areas between the two organizations has produced a strong overall relationship.

Pioneer Joint Vocational School and North Central Technical College

North Central Technical College and Pioneer Joint Vocational School (JVS) have established a good and growing articulated relationship.

Pioneer JVS serves a five-county area, providing vocational skill training for eleventh- and twelfth-grade students. It attracts a student body of 1,250 students from the fourteen high schools in the district. This is approximately 33 percent of all available junior and senior students.

Pioneer JVS offers thirty-four vocational programs. The students enrolled in these programs encompass a range of abilities, with 10 percent requiring Individual Educational Plans. Nearly 7 percent of the graduates go on for further training, primarily in two-year colleges.

Regularly enrolled students of high schools within the Pioneer Joint Vocational District are eligible to attend Pioneer JVS if they have achieved proper grade rank and are in good standing at their parent school. Students participating in Pioneer's vocational education program graduate from their home community high school. They are eligible to participate in their parent school's athletic and extracurricular activities even though they spend their entire day at Pioneer JVS. Students attending Pioneer spend three hours a day in laboratory or shop experience in their elected vocational area plus one and one-half hours a day in related work in science and mathematics. The rest of the school day is spent in academic subjects required for high school graduation. Successful graduates of these programs have the opportunity to further their education at North Central Technical College. The JVS and the college have established articulated agreements to facilitate that process.

The only possible area for competition between the two schools is in adult education offerings. Pioneer JVS has an adult evening education program providing semester courses in job training programs, small business management, farm busines planning and analysis, adult basic education, and general courses. Other than the adult education program at Pioneer JVS, Pioneer and North Central Technical College serve different age groups and a different clientele. Their basic purpose in working together is to serve the educational needs of traditional age students as they move from one level to the next and to facilitate and encourage that process.

The Ohio Board of Regents stimulated articulation in 1977 and in 1978 by conducting meetings to encourage such linkages. The philosophical basis for linkage was incorporated in NCTC's strategic plan for functional relationships. Agencies with which the college should establish articulated, coordinated efforts were identified and strategies for achieving these linkages were developed. In 1980 NCTC followed the model established by the Dallas County Community College District for articulation between its colleges and high schools. Articulation in this model is based on achieved competencies by students, and college credit is given for high school courses when students demonstrated that they have acquired the competencies necessary in college courses.

The program for college credit at NCTC for high school courses is called the Advanced Standing Program. It is designed to reduce the possibility of high school graduates duplicating course content during their college experience when they have already developed the required competency. Competencies that are required in several beginning college courses are outlined on an evaluation score card. As a high school student demonstrates proficiency in each of the competencies, his or her high school teacher signs the card. After all the competencies have been met, the high school student or graduate can apply for advanced standing. To receive credit, the student must apply for admission.

A total of fifteen hours of advanced credit may be received if a high school student receives an A in data processing and the high school teacher has signed off on the required competencies. A student who receives a B or C may take a proficiency examination; if he or she meets the standard set by the program, credit will be granted. A fee is charged for taking proficiency exams.

Thus, there are two main ways for students at Pioneer Joint Vocational School to receive academic credit at NCTC for work taken at the JVS. They may either demonstrate their competency and achieve the required grade at the JVS or pass a proficiency examination administered by the college. Advanced standing requires extensive involvement of the high school teachers to sign off on the competencies.

The articulation process started with the drafting program, and some students have gone on to NCTC and received credit for these courses. Instructors at Pioneer are on the advisory committee for NCTC's drafting and design program.

The easiest mesh was in data processing, where the two schools used the same textbook. The instructors met to work out the awarding of credit. Other programs at North Central Technical College where this articulation process is being implemented are accounting, electrical engineering, mechanical engineering, and practical nursing.

This system appears to be serving students, but is somewhat cumbersome. Difficulties are worked out as they come up, and open and active communication appears to solve problems, with everyone striving to serve the best interests of the students.

There appears to be good relationships between the top administrators in each school, along with the desire to work together, and this sets the tone for everyone else in the organizations. The people in student personnel at both institutions are actively involved in setting up these arrangements and making them work, as are their counterparts at the departmental level. The motivating factors are to best serve the needs of students and to facilitate their further education.

Mid-Ohio Consortium for Industrial Training and North Central Technical College

The Mid-Ohio Consortium for Industrial Training was formed to facilitate and encourage economic development and stability through training and retraining of workers. This is done through the cooperation of business, industry, and public education. The consortium is sponsored and funded through a cooperative effort between the Ohio Department of Education, Division of Vocational Education, and the Ohio Department of Development. The consortium's programs for business and industry emphasize customized job training, human resource development, increased productivity, and improved management efficiency.

The organization was formed as a result of a mandate in 1981, at which time the executive director was hired. NCTC was one of the original members of the consortium. A constitution was adopted that allows for a division of labor among three standing committees. The executive committee is a decision-making body consisting of representatives of each public institution that provides job training, along with the officers of the consortium. The advisory committee is composed of representatives of industry, chambers of commerce, and educators concerned with consortium activities. The training committee acts as a resource to the executive director in planning programs to meet individual companys' needs.

The Mid-Ohio Consortium serves the area of Richland, Crawford, Ashland, Knox, western Holmes, and eastern Morrow counties. The active participants in the consortium are the Bucyrus Chamber of Commerce, the Richland Economic Development Corporation, the Ashland Chamber of Commerce, Pioneer Joint Vocational School, the Ashland-West Holmes Joint Vocational School, Madison Local Schools, Mansfield City Schools, North Central Technical College, The Ohio State University-Mansfield, and industry representatives from each community.

Companies must invest in capital equipment and/or create new jobs to be eligible for funds from the consortium. There are also limited funds available under restrictive criteria to help retain industry.

The president of North Central Technical College was involved in forming the consortium and has continued to support it. Among other things, the college provides an office and secretarial help for the consortium executive director. The college is represented on all three consortium standing committees: executive committee, advisory committee, and training committee. Pioneer Joint Vocational School is the fiscal agent for the consortium.

The college has been engaged in funded training endeavors through the consortium. It is currently involved in providing training in electronics for the Fisher Body Company. Also, company-sponsored training has occurred with no consortium dollars involved.

The consortium also has been very helpful in facilitating communication and other activities that go beyond the regular consortium objective and functions among the vocational training service providers.

Analysis of Institutional Relationships

An analytical framework for the study of the IORs, which were the subjects of this research, was presented in chapter 1. The framework was used to collect data on the Mansfield, Ohio, study sites and to analyze similar IORs reported in the literature. It is also used in the following sections to report and explain the findings from the site studies and literature review.

Situational Factors

As indicated in the preceding chapter, certain situational conditions are necessary in order for IORs to develop. These conditions have been defined and referred to as resource interdependency/mutual benefit, commitment, awareness, and consensus.

In the following paragraphs, the presence or absence of these situational factors is discussed for the cases studied.

Resource interdependence. This factor deals with organizations' needs to share one anothers resources or to gain access to external resources that become available as a result of cooperation, in order to accomplish their respective goals. Resource interdependence, or mutual benefit, is one of the basic reasons that IORs occur.

Arrangements between educational and health care institutions to provide clinical experience for students have been common for many years, but a clear understanding of them is still being sought. In the 1960s, a five-year project was conducted in the state of New York that resulted in the publication of a guide to assist college personnel in selecting appropriate educational settings for nursing students. Yet, fifteen years later, the director of that project observed that "the use of health service agencies. . . . as clinical laboratories has been one of the most difficult educational arrangements confronting health related programs offered by community colleges" (Kinsinger 1979, p. 19).

Among the relationships involved in the three dyads studied, the dependence of North Central Technical College on Mansfield General Hospital was the most apparent. As the major medical facility in north-central Ohio, MGH is essential to the college in providing clinical experience in several of its health technologies. For instance, MGH is the only place in the area where NCTC nursing students can get clinical experience in pediatrics. The clinical experiences at MGH provide high-quality instructional situations in both scope and depth. In addition to providing clinical experience to NCTC students in health technologies, the hospital also provides advice to the college in developing and changing technical programs, sets standards of performance, funds a full-time radiological instructor, and furnishes clinical equipment and teaching tools.

Mansfield General Hospital is also very dependent upon the college for a continuing supply of well-qualified personnel. The majority of MGH nurses are graduates of the college, as are the staff members in radiology and in respiratory therapy. The college-hospital IOR enables the hospital to hire the "pick of the crop." As the MGH president stated, "Quality patient care requires quality personnel." This relationship is financially beneficial to both NCTC and MGH and helps both organizations achieve their goals.

In discussing a particularly successful instance of an IOR involving a hospital and community college, Tworek (1977) concluded that "the mutual sharing of resources in an articulated, inter-institutional process offers one solution to the current problems of austerity budgets and reduction of potential funding

for the development and operation of health related programs" (p. 144). And Kinsinger (1979), in a review of the history of an educational-health care IOR, stressed the importance of resource exchange to these relations by noting that "with few exceptions, the arrangement has depended on an assumed quid pro quo" (p. 19).

Thus, even though interorganizational arrangements between education and health care institutions have been in existence for many years, mutual benefit remains the key. Tworek cites a number of reasons that a typical arrangement is mutually beneficial. The hospital (1) has the expertise to provide the medical supervision of the clinical instruction and (2) has access to funding support not available to a community college. The community college (1) has the competency to provide general studies, science, and other required courses--in consultation with the hospital--(2) has the authority to award an associate degree and give other educational opportunities to students, and (3) has its own funding sources not available to the hospital. Other potential benefits to the hospital are given by Kinsinger:

> Collecting students in a clinical setting stimulate a learning atmosphere that results in better patient service, and the procedure a student performs for a patient as a learning experience sometimes is in lieu of that service performed by a paid staff member. Also, an agency that has helped train a student often has the first opportunity for hiring the graduate. (p. 19)

In summary, it seems probable that resource interdependence and mutual benefit are the most power explanatory variables for a successful education-health care IOR. Such relations are prime examples of how cooperative education should work.

The relationship between NCTC and Pioneer Joint Vocational School reveals a lesser degree of resource interdependence, although each helps the other achieve its goals of better serving the needs of students. The articulation agreement enables students from Pioneer JVS to receive academic credit at NCTC for the achievement of competencies they developed at the JVS. The articulated relationship translates the philosophical commitment of the College into operational goals and provides an incentive to the JVS students. Both institutions benefit from the information exchange that occurs between their two faculties. Faculty members of each institution contribute time and maintain communication with one another serving on each other's advisory committees.

A study focusing on IORs in adult vocational education, in which secondary-postsecondary linkages were prominent, summarized its findings as follows:

> In conclusion, the relationships among providers of adult vocational education seem to be characterized by neither widespread cooperation nor overt competition. Rather the term that seems to best portray these relaships is indifference. By indifference we mean that although the various providers are well aware of each other, they tend to go their own separate ways in programming neither conflicting nor cooperating with each other in any substantial degree. (Beder and Darkenwald 1979, p. 144)

The importance of resource interdependence to IORs was another strongly emphasized finding of Beder and Darkenwald (1979):

> As we have stressed repeatedly, articulation does not take place simply because it is the good or sensible thing to do. Meetings and conferences, regulations and exhortations are not enough to bring about change. (p. 160)
>
> A significant increase in coordination and cooperation among public institutions cannot be expected in the absence of tangible incentives .... Institutions cooperate with one-another only on the basis of a quid pro quo. Each must stand to gain significant benefits from the relationship. (p. 159)

At least two of the five exemplary cases described in the AACJC/AVA joint study (Bushnell 1978) appear to be explainable, to a great extent, on the basis of their resource interdependencies. One case involved the Williamsport Area Community College, in Williamsport, Pennsylvania. This college has been serving a ten-county rural area for many years, and its linkage with the school districts of this area to provide secondary level vocational education is of long standing. The seventeen high schools in the area benefit by being able to offer a transferable and more diversified program to their vocational students at a lower cost. (Per-student cost is 20 percent below the state average). The college, in turn, has been able to offer an expanded program due to the high rate of utilization of its facilities (Fedderson and Loch 1977).

Another case that seems to be firmly based on resource interdependencies involves two agencies in Johnstown, New York. Like Williamsport, Johnstown is a rather sparsely populated rural community with below-average per capita income. Neither the Fulton Montgomery Community College (FMCC) nor the Board of Cooperative Education Services (BOCES) in Johnstown has had bountiful resources at its disposal. Beginning very modestly in 1964, they have progressivley entered into a succession of

arrangements to share equipment, facilities, funding, and staff expertise (Smith 1977).

Resource scarcity seems to be the chief explanation for the two cases cited above. Beder and Darkenwald (1979) referred to resource scarcity as a motivating force behind IORs, but they did not find it to be a salient factor in community college-vocational school relationships in New Jersey, where their study was concentrated. They observed that

> under conditions such as resource sufficiency. . . . it is not surprizing that there is some resistance to linkage formation and articulation between the community college and the vocational school. (p. 31)

It is important to note, however, that the promise of additional resources in a situation of resource scarcity is not a condition sufficient to produce linkage. Lindsay, Queeney and Smutz (1981) have cited a number of authors to show that IORs involve substantial costs that may include decreased autonomy and heavy resource commitments. In a study of local vocational education agencies in Illinois, McCormick et al. (1980) found that a lack of resources (time, money, staff, etc.) were cited in 44 percent of the responses to the question "What do you think are the factors that inhibit articulation efforts in your institution?" Indeed, this was the single largest categorical response to the question. Thus, the prospect of gaining access to additional resources by entering into an IOR must be weighed against the costs that will be incurred. Even established IORs may not endure if once favorable cost-benefit relations shift and become unfavorable.

The resource interdependence between NCTC and the Mid-Ohio consortium is not the same, but both feel strongly that by working together they can best serve an external environment need and meet a common goal. That goal is to contribute to the economic development and stability of north-central Ohio through the training and retraining of workers for industry. The consortium feels a strong resource dependence on the college, for as the consortium director said, "the consortium is nothing without its members." Although the college receives funds for some industry training through the consortium, it is not dependent upon the consortium for its economic well-being. In addition, the college receives good public relations and benefits from the establishment of communication links between the college and industry. The consortium receives from NCTC an office, secretarial help and other support services, and technical training and retraining services for area companies.

The exchange of resources and services helps both parties address their goals and better contribute to their service areas.

Commitment. This factor refers to the extent of dedication to making the IOR successful. There usually is a strong correlation between the amount of resource interdependence and the degree of commitment.

At the project field site studied in north-central Ohio, the key individuals in each involved organization expressed high dedication to making the interorganizational relationship work. The top officers of each organization are the ones that are instrumental in fostering and actuating that commitment. As was expressed by the administrators at Mansfield General Hospital, commitment and cooperation must start at the top and then go down. Some of the visible elements of that dedication are the written agreements between NCTC and MGH, as well as the written document describing the articulated credit arrangement between the college and Pioneer JVS. Other tangible evidence of dedication includes time that appropriate personnel spend in operationalizing that commitment, the hospital's funding of a radiological technology instructor, the office and support services provided to the Mid-Ohio consortium by the college, and the funds from the Consortium to NCTC for training industry workers.

Just because there is a strong mutual benefit rationale for an interorganizational relationship, development of the IOR will not necessarily follow effortlessly. A statement approved by the American Hospital Association in 1967 (Kahler et al. 1967) reminded hospitals of their responsibilities, including the following:

> Collaboration with another institution in an educational program implies a relationship in which both institutions constantly seek to improve and strengthen the program. The hospital has the responsibility of promoting acceptance of the program by the hospital's professional and administrative staffs and fostering coordinated relationships between the school and the various departments of the hospital concerned with the program. (p. 50)

Commitment is a situational variable necessary for a successful IOR regardless of whether the stimulus for the IOR is internal (resource interdependence) or external (system change).

The survey by McCormick et al. (1980) of local-level vocational education agencies in Illinois found that attitudinal factors constituted the second most frequently reported of eleven inhibitors of articulation efforts. Provincialism or territorialism and staff indifference were named among these negative attitudes. Attitudinal inhibitors accounted for 26 percent of all responses.

The importance of resource interdependency in explaining successful IORs has already been discussed and several examples have been cited of relationships which were predominantly the result of such interdependencies. Cases are also reported in which external forces seem to have been more influential than internal resource interdependence. Three of the five exemplary cases described in the AACJC/AVA joint study appear to be of this nature.

One case in which external influences were vital involved Kellogg Community College (KCC) and Calhoun Area Vocational Center (CAVA) of Battle Creek, Michigan (Bushnell 1978). The cooperative arrangement between these two schools resulted from concerted community action--action that was encouraged at the state level by department of education policy on articulation. With community prompting, KCC began a feasibility study for an area vocational service in 1962. The resulting report was termed a "blueprint for cooperation." It recommended services to be provided, clients to be served, and the advisory and policy structure for the new school. CAVA opened in 1970. The two schools then jointly proposed and received state funding for a curriculum articulation project. The two schools demonstrate the effects of their linkage through shared facilities, equipment and staff, articulated curriculum, and coordinated guidance, counseling, and planning. The community continues to maintain a substantial involvement in policy setting through both advisory and program planning committees.

A second case reported by the AACJC/AVA joint study was that of Bellevue Community College (BCC), of Bellevue, Washington, and a network of associated school districts, vocational-technical institutes, and community colleges (Eddy 1977). These institutions have been members of the state-funded Northeast Vocational Advisory Council (NEVAC). With the encouragement of the Washington Council of Local Administrators of Vocational Education (WCLA), NEVAC undertook the task of developing a curriculum articulation model. Bellevue Community College took a leadership role in this effort.

A third case cited by the AACJC/AVA joint study concerns the Milwaukee Area Technical College (MATC) and its numerous IORs (Nugent, 1977). This immense institution is the largest of its kind in the nation (73,000 full- and part-time students, four separate campuses, and 185 programs) and its linkages with other agencies and programs are numerous and diverse. This appears to be due, in large measure, to the state system of governance, in which the state Superintendent of Schools, the president of the University of Wisconsin's Board of Regents, and the president of the state Vocational, Technical, and Adult Education (VTAE) Board, all sit on the state boards that govern vocational, technical, and higher education in Wisconsin. The Wisconsin system of governance has resulted in rationalization of goals and

programs and a pervasive climate of cooperation. Thus, the dependence upon MATC of other institutions (twenty-one high schools and a number of colleges and training agencies were mentioned) appears to be the result of state-level commitments to overall needs and to decision-making structures and processes that involve linkage and are concerned with reduction of duplication at the highest levels.

The three cases of cooperation cited above appear to share a common theme. Encouragement and incentives from without seem to account for the emergence and development of each IOR, to a far greater extent than internal concerns for resources. These external influences were of various forms, including strong grass-roots community involvement in planning and decision making, state funding for local joint councils and articulation projects, state-level governance systems in which articulation occurs at the highest levels, and state-level policy calling for the rationalization of goals and programs. This is not to say that the local-level participants in each IOR did not also receive a benefit, believed to be at least as great as the cost. As suggested by Beder and Darkenwald in their study of New Jersey adult education agencies,

> It has become common for county, state and federal agencies to mandate cooperation. . . . Although such mandated cooperation may provide for communication that would not otherwise exist, our data suggest that genuine and lasting cooperative efforts seldom develop through mandate. As previously noted, sound cooperative relationships are built on the pragmatic foundation of net benefit to all parties concerned.

Awareness. The knowledge of environmental needs, problems, or opportunities, knowledge of another agency's goals and services, and the personal acquaintance of agency representatives constitute awareness. Awareness by the different agencies of one another appears to be the absolute minimum condition before an IOR is even conceivable. Before significant development of IOR is possible, a deepening of interpersonal relationships and development of mutual respect and trust between the relating agencies' "boundary personnel" appear to be necessary, as well. Benson (1975) refers to this as positive evaluation, which he defines as "the judgment by workers in one organization of the value of the work of another organization."

Key persons in all the organizations involved in the field-site study were very knowledgeable of the other organization in the dyadic relationship. This knowledge extends to the need for working together, the opportunities for joint endeavors, and the capabilities, services, and goals of the other organization. In addition to knowing about the other organization, the linking

agents in the organizations were well acquainted with each other. There has been an administrative emphasis on getting faculty and staff members in each organization acquainted with their counterparts in the other organization. For instance, at NCTC and Pioneer JVS, the admissions people and the counselors knew each other well and the faculty members in the corresponding departments were in the process of becoming better acquainted.

A relationship of confidence and trust clearly existed between persons at the college and the hospital. At the JVS and NCTC, confidence and trust were particularly strong between student personnel counterparts and between the faculties of the two data processing programs. The consortium executive director had the full confidence of the consortium board (which included the NCTC president) and the confidence of the faculty appeared to be growing the more they were involved in consortium activities.

The importance of mutual respect to the education-health care IOR is shown by the American Hospital Association's "Statement on Role and Responsibilities of the Hospital in Providing Clinical Facilities for a Collaborative Educational Program in the Health Field," in the following words:

> By the very fact that it permits another educational institution to use its facilities, the hospital gives assurance to the public and to the students that it has appraised and endorsed the quality of the overall educational program. (Kahler et al. 1967, p. 50)

Empirical support for the importance of positive evaluation is also offered by a recent study of community hospital-medical school affiliation agreements (Murphy 1980), in which it was found that interpersonal relations between chairpersons of parallel departments of hospitals and schools that existed when the affiliation developed were positively related to the levels and intensities of the existing medical education programs in the respective hospital departments.

Involvement in a meaningful IOR frequently involves some loss of autonomy, a risk that will not be taken without considerable assurance that the other party can and will perform as expected. Williamsport Area Community College (WACC) one of the five AACJC/AVA cases, discussed previously, is one example of an institution that enjoys the confidence and respect of its community. This is attributed to its responsiveness to local training needs over the many years of its operation. WACC continues to maintain contact with its various publics through a number of committees that are both advisory and policy-making. In addition to these structured contacts, informal contacts are considered essential to the success of WACC's linkages. Fedderson and Loch (1977) stress the importance of "the continual effort of faculty and administrators to create interpersonal relationships with the

. . . leaders of local school systems, business, and other secondary and postsecondary institutions" (p. 14). It cannot be assumed that institutions in close physical proximity are therefore "aware" of one another in any meaningful sense. Beder and Darkenwald's study in New Jersey provides some good examples of this.

Consensus. The analytic model of IORs employed in this study considers consensus to consist of two aspects: ideological and domain. Ideological consensus is defined as agreement among agencies regarding the nature of the tasks they confront and the appropriate approaches to those tasks. Domain consensus is defined as agreement between agencies as to the appropriate role and scope of each. These two aspects of consensus appear to be highly important to the establishment of an IOR.

It is difficult for agencies that have differing beliefs and values concerning the solution to problems that confront them to cooperate in a very meaningful way. The explanation of much of the less than wholehearted collaboration between vocational education and CETA agencies may be traced to this. Cooperation and collaboration between agencies with conflicting notions about how best to attack training problems could be expected to be difficult, and the kind of mutual respect discussed under the heading of "awareness" difficult to establish.

Domain consensus is also a very powerful concept in understanding why and how successful IORs emerge and are maintained. An agency's domain is the range of activities it claims for itself as its particular arena of operations (Levine and White 1961). Conflict arises when other agencies dispute the claim. The domains of two agencies may either be complementary or competitive as they seek to obtain the resources they need from their environments.

The consensus factor is a very interesting one as applied to the organizations in the project's field-site study, for the responses vary considerably. The dyad with the strongest and richest relationship also seemed to have the greatest diversity of responses. North Central Technical College and Mansfield General Hospital both stated that their goals are different but compatible. The hospital exists to provide patient care, while NCTC exists to provide educational services. The written agreement is very helpful because it clearly spells out the responsibilities of each. However, as the representatives of MGH said, "There are always things to work out." This is probably true because of the depth and extent of their daily interaction, involving so many people.

While the missions of each organization are different, both are interested in developing high-quality health care personnel. Continuing health education is also a goal of the hospital that

fits in well with those of the college. Both organizations feel strong commitment to the community. Although their clients are very different (students, as compared to patients), these client groups come from the broad spectrum of persons in the community. Also, both the college and the hospital are nonprofit agencies and they both report to external authorities (accreditation agencies).

Thus, the good working relationship between NCTC and MGH appears to be due to the resource interdependence, commitment, and good personal relationships between the two, which enables them to work out amicably and satisfactorily solutions to needs or problems. This is further enhanced by a high degree of similarity in the competencies and skills of the staff members of the two organizations. (Both must be competent practitioners as well as teachers.) Also, many of the NCTC health technology instructors are former MGH employees.

There is typically no problem of domain conflict in education-health care IORs, since the two organizations provide very different services as their primary functions. However, healthy IORs also depend on ideological consensus. The American Hospital Association's statement on roles and responsibilities recognizes this:

> Prior to making a decision on whether or not to make clinical facilities available for educational purposes, hospital authorities have the responsibility to review the philosophy underlying the other institution's objectives, its consequent goals, and the broad educational policies established to achieve these goals. On these matters the hospital must be in basic agreement with the school, since it will share the responsibility for ensuring an education program of acceptable standards. (Kahler et al. 1967, p. 50, emphasis added)

In the dyadic relationship between North Central Technical College and Pioneer JVS, all parties gave a medium to high ranking to consensus or agreement. They stated that there was strong agreement on the needs to be served and that they were working out the process. They felt the goals of their organizations to be very compatible, since all are engaged in preparing people for employment. The goals of their working together are being operationalized at the department or vocational-technical program level. They have achieved the most articulation in the data processing program area, and other program areas are implementing the same kind of articulated arrangement. Written documents specifying the agreement and the process have been very helpful.

This articulation is facilitated by the fact that there is a high degree of similarity in that both are educational institutions. Major distinctions are those of level and focus. Conflict is reduced and agreement is enhanced because there is considerable difference in their clients, even though in both cases they are students. Pioneer JVS has students without a high school diploma, usually of high school age, while the average age of students at NCTC is twenty-eight. Thus, there are commonalities in goals and domain that foster agreement, with few areas for conflict.

For linkages among vocational education agencies, Beder and Darkenwald (1979) observed that

> linkage relationships between provider institutions with similar educational missions are more likely to be fewer and/or to have restrictions associated with the exchange agreement. (p. 29)

The results of their national survey of state department personnel responsible for adult education showed that domain conflict had a "statistically significant impact on coordination and cooperation among providers of adult occupational education" (p. 156). They concluded that the greatest potential for linkage is between agencies having complementary goals and resource needs.

The AACJC/AVA case studies provide at least two examples of complimentary domains in secondary-postsecondary relationships. The relationship between Calhoun Area Vocational Center (CAVA) and Kellogg Community College (Battle Creek) was designed so as to avoid domain conflict (Bushnell 1978). That is, before CAVA was developed, strong community interests took action to ensure that the two schools would jointly function in such an articulated fashion that the best interests of the community would be served. The domains of the two institutions are by design differentiated but articulated.

The relationship between the Williamsport Area Community College and the many high schools it serves offers another example of differentiated domains which serve the public interest well (Fedderson and Loch 1977). Even though this relationship evolved over a longer period of time and was perhaps the result of less direct community intervention, the results with respect to domain consensus appear to be similar to those at Battle Creek.

There is a high degree of consensus between NCTC and the Mid-Ohio Consortium for Industrial Training. The consortium executive director believes that much of this may be due to the fact that she comes to this position from higher education. A high level of agreement exists between the NCTC president and the consortium executive director; at the faculty level consensus is

less, probably because the degree of involvement at the faculty level is less. The process of deciding which of the vocational-technical service providers is to deliver the training for a certain company when state funds are provided is coordinated by the consortium executive director. The company's specifications for training are discussed with the consortium training committee and executive committee. It is ascertained which of the consortium members are able to provide the specified training. The company then selects the institution it believes can best meet its training needs. This process reduces conflict and hurt feelings.

The leaders of the two organizations believe that their organizational services are different, but complementary. This facilitates agreement. The consortium provides a consulting service and some state funds for training, while the college sells further and continuing education. On the whole, the clients of the two agencies are different in that the college's primary clients are students while the consortium's primary clients are companies. A potential source of conflict is that NCTC's continuing education division also serves companies directly. Although this is only an auxiliary function of the college, differences still have to be resolved.

Again, mutual commitment and needing each other to address a common purpose are the driving forces making this dyadic relationship work.

Structural Dimensions

Whereas the situational factors of the model explain the emergence of an interorganizational relationship, the model's structural and process dimensions describe the essential and differentiating aspects of the relationship. Administrative arrangements established to define the role relationships of the members of an IOR are an inherent part of the structural dimensions. The structural dimensions include the formal characteristics of the IOR (formalization), the locus of decision making (centralization), and the complexity of the arrangement in terms of the number of agencies, projects, and tasks that are involved.

Formalization. Formalization refers to the degree to which rules, policies, and procedures govern both the agreements between the parties and their contacts. Written agreements are a common aspect of IOR formalization. So are advisory and policy-making structures, often included in the written agreements.

Each of the three dyadic interorganizational relationships in the field-site study is characterized by a written agreement or document. NCTC and Mansfield General Hospital have the most detailed and extensive agreement. Such an agreement is required

by the accrediting bodies for each institution. The college wrote the initial draft agreement for each program that uses the hospital as a clinical training site. These were finalized following discussions between the two organizations. The responsibilities of each party are clearly specified. Each year the agreements are jointly reviewed and updated.

The written agreement between NCTC and Pioneer Joint Vocational School is not as formal; it is more a document identifying how Pioneer JVS students can receive academic credit at NCTC for competencies gained in high school courses and what students and teachers need to do for credit to be awarded.

The revised constitution of the Mid-Ohio Consortium serves as the agreement between the Consortium as an entity and its members. Guidelines for operation and cooperation are included in the constitution. These guidelines are important to smooth functioning.

Representatives of the organizations in all three dyads said that although they have formal written agreements, their contacts are usually informal. Brief meetings and phone conversations usually take care of the business at hand. Usually, appropriate operational personnel in each organization resolve the problem or meet the need, although policy questions are handled at administrative levels.

Written agreements between the parties to an IOR are the principal evidence of formalization. Written agreements have characterized relations between educational and health care agencies for many years. A guide to such relations, published in the 1960s (University of the State of New York 1966) contains a sample agreement. The 1967 statement of the American Hospital Association on roles and responsibilities (Kahler et al. 1967) specifies that a formal contract or agreement be established and details terms that should be included. Atkins (1979) has more recently observed that "clinical agreements will become increasingly more important to educational institutions as legal questions are asked and as economic pressures on clinical facilities continue to increase" (p. 1). Atkins presents both legal and nonlegal arguments for a formal agreement. These arguments include the strong endorsements of the AMA Council of Medical Education, the National Accrediting Agency for Clinical Laboratory Sciences, and others for agreements and for specific responsibilities within those agreements.

Written agreements, or contracts, usually signify a degree of maturity in the relationship (Klonglan et al. 1976). Thus, it is not surprising that all of the cases selected by the AACJC/AVA joint study are characterized by written agreements. Formalization of contacts may include provisions for program advisory committees, general advisory committees, liaison committees, and executive councils, to name a few.

The literature on agreements involving vocational education deliverers identifies two purposes for agreements. The first of these is the more obvious, which is to establish as clearly as possible the terms of the agreement so as to avoid unnecessary misunderstanding and conflict later on. A second explanation mentioned by Beder and Darkenwald (1979, p. 75), may be to forestall a perceived encroachment by one agency on the domain of the other.

Centralization. The dimension of centralization is concerned with the locus of power, influence, and decision making. The participants in all three dyads said that most decisions are reached mutually. In looking at who exerts the most influence in reaching those decisions, however, some distinctions were made. In the relationships between NCTC and Mansfield General Hospital, the influence varies on a program-by-program basis. In the hospital environment, NCTC lacks the power of status but has the power of information. The good reputation of NCTC graduates enables the college to exert more influence. The amount of influence depends of the type of problem under discussion. NCTC has more influence on educational decisions and MGH more influence on clinical decisions.

Although decisions are reached mutually in the dyadic relationship between NCTC and Pioneer Joint Vocational School, it was believed by both parties that the college has more influence. This is because the college is the receiving institution, both of the requests for advanced status and of the students matriculating there from the JVS.

In the working relationship between the college and the Mid-Ohio Consortium, the consortium executive director thought there was strong influence with the NCTC president and lower influence with faculty members. The college president believed that decisions were reached through a participative management approach.

In these three dyads, it appears that the organization that has more at stake in the relationship also has the greatest influence in reaching mutual decisions.

The case studies provided by the AACJC/AVA joint study referred to previously seem to provide examples of several types. Even though decision making appears to be shared in all of the cases described, the Milwaukee Area Technical College, the Williamsport Area Community College, and the Bellevue Community College seem clearly to be examples of institutions that hold dominant positions in their respective IORs. In Battle Creek, the focus of authority appeared to remain in the community, somewhat external to the two institutions involved in the IOR, and in the remaining case (Johnstown, New York) the reported information gives no clear indication of a consistent locus of influence.

Complexity. Complexity is the number of differential elements, e.g., agencies, projects, tasks--that must be dealt with and integrated in order for the IOR to function. In a dyadic relationship, complexity basically means the number of linkages between the two organizations or the number of functions or subunits involved.

In identifying these linkages, the college and the hospital had the greatest number and the greatest variety of linkages of the three dyads. The major linkages were through the four technical programs conducted by the college using MGH as the clinical site: associate degree nursing, licensed practical nursing, radiological technology, and respiratory therapy technology. Other linkages are joint continuing education programs, NCTC staff on MGH committees, MGH staff on NCTC program advisory committees, MGH serving as a site for field trips of other NCTC programs, hospital professionals speaking in some NCTC classes, and joint involvement in the Richland County Health Planning Development Council.

NCTC and Pioneer Joint Vocational School also had a variety of linkages. The most important linkages are those between departments in the two institutions developing and maintaining articulation agreements. Such agreements also require linkages at the administrative level and between student services units. Other linkages between these two institutions involve developmental courses in chemistry and algebra, financial aid workshops, advisory committees, Career Day, College Night, special presentations in classes, and the Mid-Ohio Consortium for Industrial Training.

Each of these activities in the various dyads often requires interaction at various levels and in several areas of the institutions.

Structural conflict. Structural conflicts occur over the basic identities and responsibilities that define a relationship; such conflicts reflect an inability to establish or maintain the basic rules governing the relationship (Molnar and Rogers 1979).

The extent of conflict in the three dyadic relationships studied was slight, even though the potential for conflict was present because of overlapping areas of interest and some competition for students or clients. The greatest potential for conflict appears to be in the dyad of the college and the hospital, as both institutions operate a nursing program to prepare registered nurses. Representatives of each strongly state that the other institution has never attempted to interfere with their institution obtaining its goals. Even though the basic responsibility of the hospital is to its patients, while the college's main responsibility is to its students, they indicated that these different responsibilities and priorities have not created

conflict. They acknowledged that the potential is present but that realistic expectations keep it low.

Between the college and Pioneer JVS, the amount of conflict due to conflicting responsibilities or priorities is also small. Although there currently is no conflict, both saw the potential for conflict between Pioneer's adult education services and NCTC's services for upgrading and retraining workers. Each clearly stated that the other organization has never interfered with the attainment of its goals.

Representatives of NCTC and the Mid-Ohio Consortium indicated a low degree of conflict. In their view, there is no administrative conflict, but some programmatic conflict. The college's agent for the Ohio Technology Transfer Organization (OTTO) and the consortium sometimes conflict over domain in working with certain companies. Also, the consortium and NCTC's continuing education department are occasionally in conflict. Resolutions are worked out on a one-to-one basis. Again, neither party felt there was any deliberate attempt to interfere in the attainment of its goals.

At the field site, commitment and resource interdependency apparently have an overriding effect in areas of potential conflict.

Despite the importance of formalization to a viable IOR, the existence of an agreement does not guarantee a workable relationship. Formalization should provide structural support for the IOR. Hence, formalization should lead to actual processes of working together, but it can be rendered ineffective if the necessary preconditions (i.e., situational factors) are weak or missing. An example of this is reported by Dempster (1982). In this case, a secondary and a postsecondary school entered into an articulation agreement regarding their nursing students. However, the agreement accomplished nothing because there was a lack of motivation to make it structurally viable. Resource interdependence and commitment were both lacking and structural conflict was ignored, rendering the agreement ineffectual.

However, even in good relationships, some degree of structural conflict should be expected, and part of the "cost" of engaging in such relationships is conflict resolution. As observed by Bushnell (1978), "conflict within and between organizations is not inherently a destructive phenomenon but should instead be thought of as a natural outgrowth of complexity" (p. 103).

Process Dimensions

The flow of activities coming out of the structural arrangement are the process dimensions. It is these activities or

processes that reveal how well or fully the interorganizational relationship is functioning. Process dimensions include resource flows, information flows, and procedural conflict.

Resource flows. Resources here refer to the units of value transacted between organizations. These units of exchange may be such things as money, facilities, materials, clients, and staff services. Both the amount and direction of resource flows are important in interorganizational relationships.

At the field site, the greatest resource flow (in both directions) was between North Central Technical College and Mansfield General Hospital. Representatives of these organizations stated that there is a continuous flow between them, emanating from both institutions on a continuous basis. Examples of this are the provision of the clinical training facility by the hospital, the continuous supervision of the students at the hospital by NCTC faculty, the provision of patient care for educational purposes by the students, and the flow of NCTC graduates to the hospital for employment.

The resource flow between NCTC and Pioneer Joint Vocational School is on a occasional basis. They occasionally share services and share campuses for career events. The major sharing is in the areas of personnel and clients. Some students take developmental classes at NCTC and others continue their education there. Faculty and professional staff from both schools are involved in the process of articulation.

In the relationship between the college and the Mid-Ohio Consortium, there are some continuous resource flows and others of a periodic nature. There is continual college support to the consortium through the provision of office space, telephone, and secretarial services. The executive director of the consortium is continuously out "selling" the services of the consortium and its members. However, the flow of funds from the consortium to the college for a training project is only occasional.

The value of resource exchanges are frequently difficult to measure, but because linkage decisions depend so heavily on perceptions of costs incurred and benefits received, estimates of their value must be made. To meet the need for such estimates on the part of colleges and universities considering collaboration, for example, the Council of Interinstitutional Leadership has conducted a study of the costs and benefits of a number of cooperative programs (Council for Interinstitutional Leadership 1979).

It is also difficult to determine whether resource exchange between vocational education agencies represents a more or less intense form of interaction than written agreements, a formal manifestation of IOR. Research by Klonglan et al. (1976) on

social service agencies showed that for these agencies, the answer depended upon the hierarchical level of the agency. They found that resource exchange represented a more intense form of interaction between state-level agencies than it did for local-level agencies. Evidence from a study by McCormick et al. (1980) seems to support this. On the basis of an unstructured survey of state-level vocational education personnel, it appeared that resource exchanges represented a more intense level of IOR than did written agreements (p. 38). The opposite appeared to be true for local-level agencies in Illinois (p. 59). The reported values did not appear to differ greatly, and the differences were not tested for significance. These findings do suggest, however, that resources may be exchanged between local-level agencies long before formalized agreements are entered into.

Information flows. Information flows refer to the frequency, direction and modes of communication between the parties to an IOR. Clearly, information must flow between these parties before they agree to any kind of mutual assistance. Thus, it is difficult to divorce mutual awareness, a situational requirement, from information and communication. Agreements can be expected to systematize and regularize contacts, without discouraging the informal contacts that led to them. Thus, information exchange may involve a variety of media, such as newsletters, memoranda, formal letters, phone conversations, informal meetings, and formal meetings. Some indication of the intensity of information flow may be obtained by the frequency of the exchanges and the amount of time devoted to them. Quality is also a factor, but one that is more difficult to use in making comparisons.

At the project field site, communications between North Central Technical College and the other organization in each of the three dyads is conducted on a daily and weekly basis. Communication is frequent and active at the operational level. Most of the contacts are made either personally or by telephone. There were some differences of opinion as to which side initiates most of the contacts. In the case of the college/hospital dyad, NCTC thought that it initiated the contacts more often while MGH thought that initiations were about equal. In the relationship between NCTC and Pioneer JVS, the college said that the two schools initiated the contacts about equally, while the JVS said that it made the most contacts. In the college's relationships with the Mid-Ohio Consortium, there was agreement that the consortium executive director initiates most of the contacts.

The quality of the communication between NCTC and MGH was characterized as excellent and productive. There was a very positive response on the part of the college and Pioneer JVS on the quality and tone of the communication; NCTC rated it excellent and JVS good. Communication between NCTC and the Mid-Ohio Consortium was described as high quality, explicit, and to the point.

Parties in the NCTC-MGH and the NCTC-Pioneer JVS dyads all agreed that the contacts between their two organizations are

extremely important. The degree of importance assigned to the contacts between NCTC and the Mid-Ohio Consortium varied with NCTC indicating the contacts were not very important to the work of the college and the consortium rating them as extremely important.

Thus in the three dyads with North Central Technical College, it appears that communication is frequent, flows in both directions, is of high quality, and is generally perceived as being very important.

As has already been pointed out, a study by Murphy (1980) has shown that the intensity of the processes in an education-health care IOR is dependent upon other (i.e., situational) variables. The processes of IORs include both resources and information, and the flow of these should be reciprocal. The American Hospital Association's statement on roles and functions in a collaborative relationship clearly recognizes the importance of a system of communication to ensure adequate interchange of information:

> The hospital has the responsibility of . . . fostering coordinated relationships between the school and the hospital. To accomplish this, the hospital and the school must agree upon an organizational plan that provides for coordination of activities and a system of communication whereby information, recommendations, policy interpretations, evaluation, and plans for development may be exchanged readily. (Kahler et al. p. 50)

Frequent and open communication appeared to be a characteristic of all the exemplary cases of IORs reported in the AACJC/AVA joint study, particularly as they grew in intensity and complexity. McCormick et al. (1980) also reported that joint communication was the most frequent form of interaction between vocational education agencies at both the state and local levels (pp. 38, 59).

Procedural conflict. Procedural conflict occurs over interpretation and application of rules, principles, and procedures, as well as over roles and performance of a particular position or unit. Procedural conflicts reflect the continual process of mutual adjustment between interacting organizations. Procedural conflicts generally occur between organizations with greatly differing goals, technologies, structures, or orientations toward the environment. Conflict characterized many CETA-vocational education linkages because of differences in operating procedures and regulations and because of CETAs' relative instability.

There was an extremely low level of conflict between the organizations in the three dyads at the project field site. They

all saw the potential for it, but to date there has been very little conflict. All parties said that when differences do occur, they are worked out very well, usually through personal contact on an individual basis. The high compatibility of the organizations' operating philosophies helps to reduce conflict once it occurs. Also, the good communication and dedicated leadership described in the preceding section are very beneficial to avoiding or resolving conflict.

Outcome Dimensions

For an IOR to succeed, not only must its structure and processes function well, it must also be perceived to be worthwhile. Two outcome dimensions important to such perceptions are effectivenss and impact.

Effectiveness. An interorganizational relationship will be perceived to be effective if both parties meet their commitments, if the agreements and the way in which they are carried out appear to be equitable to both, if the relationship is productive in terms of meeting both agency's expectations, if there has been satisfactory conflict resolution, and if mutual evaluation continues to be positive or improves.

In each of the dyadic relationships, the participants felt that both organizations in the dyad had fulfilled their commitments to the joint effort to a high degree. There was quick agreement between NCTC and the hospital that commitments had been fulfilled. In the NCTC-Pioneer JVS relationship, both parties agreed that there was strong commitment but that the efforts and results need to be continued. NCTC and the consortium rated commitment as being consistently high.

Upon being asked directly about the degree of effectiveness of the relationships, both parties in each dyad responded that the relationship was effective to a great extent. NCTC and MGH believed they benefited greatly in their dyadic relationship. NCTC's relationship with Mansfield General Hospital enabled its students to get good experience in a clinical setting. It enabled the hospital to get good employees and provided stimulation for its own staff. In the NCTC-Pioneer linkage, representatives from both the college and Pioneer JVS believed that students have benefitted very much from the articulated arrangement. Discussions on curriculum have been beneficial and duplication of content has been reduced.

In the joint arrangement between NCTC and the Mid-Ohio Consortium, the consortium rated its benefits higher than did the college. The consortium executive director stated that the consortium is nothing without the institutions that compose it, and the College affirmed that it has benefitted from conducting the projects assigned to it and that the IOR has helped in

institutional marketing. The NCTC president said that the college's commitment to economic development is the driving force in the college's participation in the consortium.

All parties in the three field-site dyadic relationships were emphatically of the opinion that the benefits in the relationship exceeded the costs. The president of Mansfield General Hospital revealed the importance of this when he added, "If it didn't, we would not be involved."

Effectiveness is associated with the notions of efficiency, benefit, and cost. Effective IORs involve costs of various kinds, but they also provide benefits that are highly valued or that would not otherwise be available at an acceptable cost. An advantageous cost-benefit relationship is often the result of specialization, which brings with it certain efficiencies. Consequently, one way of viewing an IOR based upon resource interdependency is to see it as an agreement whereby each party to the IOR is dependent upon the expertise and specialization (hence the efficiency and low cost of related benefits) of the others. This is reflected in the rationale of Buatti and Rich (1977) for an IOR involving three institutions in a nuclear medical technology program:

> Neither colleges nor hospitals can afford to offer to students a complete range of academic and clinical experiences. . . . Each organization has what the other needs, and cooperative efforts will be more efficient than unnecessary duplication. In nuclear medical technology this is especially true due to the extensive use of and the training required for large scale, complex, and very expensive medical electronic equipment. . . . Although the operation of such a program will be more cumbersome due to the number of cooperating institutions involved, it is believed to be overall more efficient from the standpoint of sharing facilities and services, and will increase communications and cooperation in this field. (p. 1)

Evaluations of effectiveness require the test of time. Among the cases reported in the AACJC/AVA joint study, the basic IORs involving Williamsport Area Community College and those of the Milwaukee Area Technical College had been in effect for many years at the time of the study. The Calhoun-Kellogg relationship in Battle Creek was less than ten years old but growing, and the IOR described for Bellevue Community College was of similar age. The relationship between the BOCES and community college in Johnstown began very modestly in 1946 and, as mutual respect and confidence grew with each new venture, was evidently maturing. All of these cases reflect the importance of building one success on another and of the need for time to test the effectiveness of each new arrangement.

Impact. Another outcome dimension is impact. Impact is defined here as the extent to which the member organizations are perceived to change or affect the internal operations of one another (Van de Ven, Walker, and Liston 1979).

The parties to the three dyadic relationships at the field site all indicated that the relationship did bring about some changes in the operation of their organization and that these changes have generally been beneficial. Both NCTC and Pioneer JVS have achieved greater specificity of competencies within their curricula and have made some other minor curriculum changes.

In working with Mansfield General Hospital, the college had to make some scheduling changes (reassignment of clinical days at the hospital). Sometimes these changes required time slots that students considered undesirable. Also, the college has become more conscious of the importance of functional relationships with other agencies. It has helped to establish an internal climate and awareness for organizational relationships. The organizational changes at the hospital are somewhat minor, but responsibilities of individuals are different. Having the NCTC student nurses at the hospital frees certain hospital personnel to do other things and this is cost-effective.

In the college and consortium relationship, organizational changes have been appropriate but small. The consortium executive director is involved in regular college meetings and has made presentations to administrators and faculty. The relationship to the Mid-Ohio Consortium shows on the college organizational chart in that the responsibility for the relationship is assigned to the office of the vice-president for academic affairs. In regard to impact on the consortium, the consortium executive director said that the impact cannot be limited to NCTC alone. The consortium's operational procedures have evolved with input from members as a result of mutual need.

We might expect that in a rather tightly coupled educational-health service relationship, there would be evidence of impact as defined previously. One of the most obvious places to look for impact is the educational institution's course offerings. Thus, in describing the effects of an IOR developed to prepare physician's assistants, Tworek (1977) observed changes in both the technical and nontechnical courses of the community college involved in the college-hospital dyad:

> The program's curriculum was designed by . . . both institutions. Many courses specifically relevant to the projected duties of a physician's assistant were developed. For example, the community college anatomy course was expanded to . . . provide students with the knowledge necessary for entering the

> advanced clinical program. The freshman English course was also modified to emphasize such communicative skills as interviewing techniques and descriptive writing in order to prepare students to obtain and write up a patient's medical history. Other standard community college courses underwent similar modifications. (pp. 143-144)

For secondary-postsecondary relations in vocational education, adjustments in curriculum content are made to permit students to make the transition more readily or to allow advanced standing for such students. However, internal operations may be changed as a result of diverse kinds of resource dependencies (funding, personnel, facilities, equipment, etc.) that become formalized and accepted as routine.

III. CONCLUSIONS

In this chapter, we will address the usefulness of the interorganizational model for understanding why IORs between vocational education and related service deliverers either do or do not emerge and become effective. We will also suggest some possible implications of this study for practice and for further investigation.

Usefulness of the Analysis Framework

Interest in interorganizational research has been focused on social service agencies in the belief that greater cooperation and coordination between them would improve service delivery to clients and would reduce the cost of these services by eliminating unnecessary and undesirable duplication of effort. Most contributions to this field of research have resulted from studies of the interagency behavior of such agencies, while little attention has been paid to linkages involving educational and other types of organizations.

Further, most research contributions to the knowledge base have been in the form of studies of individual aspects of interorganizational phenomena. Few of the researchers in this field of study have attempted to relate and synthesize the many individual and disparate contributions. The model presented in chapter 1 is one such attempt, the only comprehensive model that we were able to discover. One of the needs for such a model arises from the fact that while many factors influence interorganizational relations, they clearly do not all have the same influence. The model should enable us to concentrate on the factors that are the most powerful in predicting and explaining effective IORs.

The model directs us to examine four situational factors that together explain why IORs emerge. These factors are resource interdependence, commitment, awareness, and consensus. Owing to the particular definitions of each of these, it seems plausible to reorganize their conceptual content and to relate that content as shown in figure 2.

Relational requirements include mutual knowledge and respect, which are included in the concept of awareness as defined in the model. Economic requirements include both the resource interdependencies that lead to resource exchange and the resources that each organization derives from its particular domain or area of operations. Ideological requirements refer to the proposition that agencies must have some measure of ideological agreement concerning their understanding of the nature of problems that confront them and the manner in which these problems

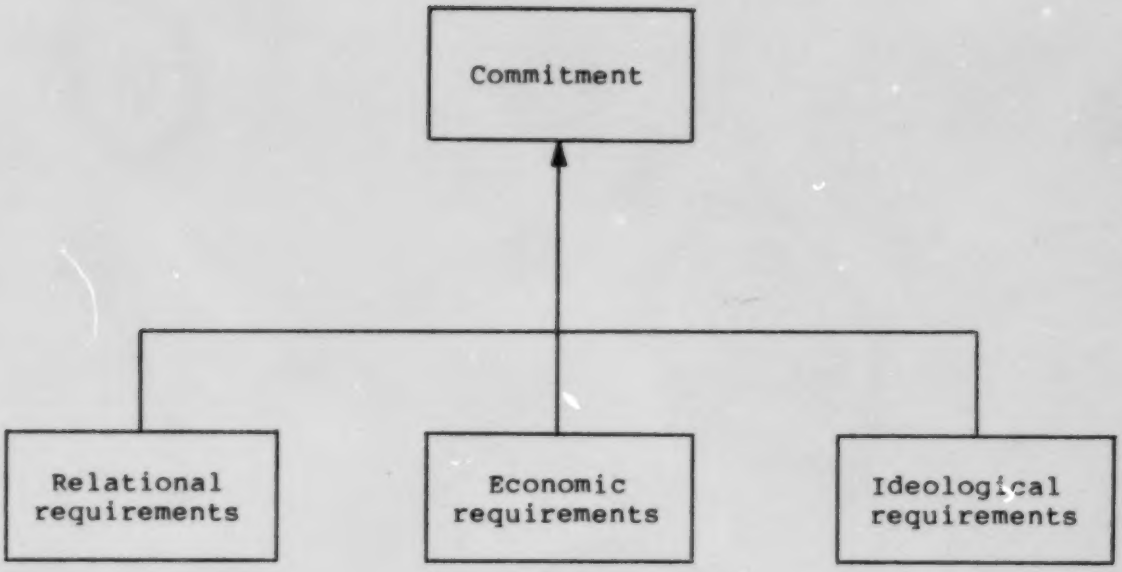

Figure 2. Requirements for interagency relations

should be approached. Commitment is clearly essential for meaningful organizational relationships, for without it nothing will happen even if all the other factors are present. But commitment to an IOR must be built upon satisfactory relations, economic benefits to be derived, and philosophical compatibility. Both the literature and the data collected from the field sites supported the saliency of these requirements.

The remainder of the analytic model directs attention to the manifestations of the IOR, that is, the structural and procedural dimensions of the interaction. These structural and procedural characteristics provide indicators or measures of the intensity of the relationship. Accordingly, the structural dimensions that should be examined include the IOR's formalization, centralization, complexity, and structural conflicts. As indicated in this report, literature concerning IORs between vocational education and related service deliverers is sparse. However, available sources of information give much more attention to formalization than to the other structural dimensions. Conflict, while not ignored, is often regarded simply as an attitudinal problem without distinguishing between possible underlying causes, such as domain or structural conflict. The concept of centralization, while not irrelevant to dyadic relationships, would seem to be more useful for examining relationships involving a network of interagency relationships. Both the literature and the site studies supported the proposition that more complex IORs--that is, those involving a multiplicity of ties--are stronger and more mature.

The importance of the process dimensions for understanding IORs lies largely in the fact that formal structures may not result in significant interaction. Thus, resource and information flows, as well as procedural conflicts, need to be examined. More needs to be done to operationalize and measure these dimensions, but this study found support for their importance as indicators and evidence that an interagency relationship is functioning and active.

With respect to the question of whether or not the model was adequately inclusive of essential dimensions, we have only modest evidence. The site studies, while not extensive in scope, did provide an opportunity to identify important dimensions of IORs that might be missing from the model. None were found. However, it is clear that the model does not include all aspects of an IOR that are important. Its focus is upon causal (i.e., situational) factors and operational dimensions--that is, the evidences of a working relationship. It does not deal, for example, with the organizational levels--top management, middle management, and operational levels--at which the IOR occurs or with the relationships between these levels of functioning. Nor does it deal directly with strategies for establishing IORs. Although many are implied, it is likely that other important considerations would be discovered as a result of systematic analysis of the history of development of IORs and their maturation processes (see, for example, Stern 1979).

Finally, to give a better sense of the representativeness of the types of relationships that were included in this study, we find the concepts of human ecologists and management scientists to be helpful. Hersey and Blanchard (1969) have stated that organizations are unique combinations of human beings and may be regarded as living organisms. Hawley (1950) referred to two basic types of relationships that exist between organisms in nature, relationships that also apply to human ecology. These relationships are termed symbiotic and commensalistic. Aldrich (1979) applied these concepts to the analysis of the IOR, observing that

> mutual dependence between unlike elements represents a symbiotic relationship, and "because they make dissimilar demands on the environment, members of different species may supplement the efforts of one another" (Hawley 1950, pp. 36-37). Species that make similar demands on the environment are in a commensalistic relation, and commensalism, "literally interpreted, means eating from the same table" (Hawley 1950, p. 30). The most common commensalistic relation is competition, which is a relation based on members of a species attempting to exploit the same resource supply. (p. 266)

Among the three dyadic relationships examined at the field site were a symbiotic relation (hospital-college), a commensalistic relation (secondary-postsecondary), and one (economic development organization-college) that had elements of both types of relationships. The model was useful as a tool for understanding interorganizational causes and effects in all three cases.

Implications for Practice and Research

The study reported here was designed to focus on describing the potential for creating and sustaining interorganizational arrangements between vocational education agencies and related service deliverers. Findings and conclusions were to be viewed as preliminary, with validation by means of a survey to be considered as a subsequent undertaking. Following is a summary of findings and tentative conclusions, with implications for practice and research.

Practical Importance of Situational Factors

Certain situational conditions are necessary in order for IORs to develop and to be sustained. These conditions have been defined and referred to as resource interdependance/mutual benefit, commitment, awareness, and consensus. They represent economic, relational, and ideological compatibilities that must be present in order for commitment to be created and sustained. Many failures to bring about or maintain meaningful IORs can be

attributed to ignorance or disregard of the essential nature of these situational factors. It behooves both policy makers and agency heads not to expect sound IORs on the basis of good intentions or mandates alone.

Implications for Higher-Level Agencies

The evidence suggests that the previously named situational factors may develop internally (that is, at the level of the parties to the IOR) or that they may be brought about by external intervention (higher-level agencies mandates, policies, and incentives). Indications are, further, that a climate of positive relationships between state-level agencies tends to promote interagency relations at the local level.

Greater openness between state agencies can be encouraged by joint membership in advisory and planning bodies and by work toward the development of meaningful agreements for coordinated objectives. State agencies then can better encourage local-level coordination by various means, such as--

- recognizing and supporting the cooperative leadership of institutional staff,
- publicizing successful collaborative efforts,
- issuing joint policy statements endorsing collaboration,
- applying political persuasion,
- conducting conferences of local-agency personnel to enhance mutual awareness, and to explore possible mutual benefits of closer collaboration,
- providing financial incentives,
- funding local facilitators, and
- making special provisions to improve responsiveness to requests from the field.

A publicized statewide policy for human resource development, such as the one developed in Indiana (State of Indiana, 1982), can contribute much to achieving such cooperation and articulation. State agencies can also facilitate local cooperation by jointly addressing state-level disincentives posed by incompatible funding cycles, reporting requirements, and evaluation criteria, for example.

Role of Resource Incentives

The prospect of additional valued resources that would become available via an interagency arrangement provides a strong incentive for collaboration. The Council for Interinstitutional Leadership (Konkel and Patterson 1981) lists the following examples of shared resources among colleges: cooperative course offerings, student and faculty exchange, joint staff and faculty development, shared facilities, shared campus, regional telecommunications, statewide group purchasing, interstate analyses and planning, and nationwide student recruitment and admissions.

Access to desired resources is not, however, a sufficient condition. Offers by policymakers of financial incentives for interagency cooperation have not always been successful because other situational factors were overlooked.

Dependency vs. Interdependency

Critical to a successful IOR is the perception by all involved parties that they receive mutual benefit as a quid pro quo. Agencies value their autonomy and are reluctant to compromise it. Engaging in an IOR typically involves some loss of autonomy. This is likely to be less of a threat if the anticipated relationship does not involve a one-sided dependency. A relationship in which there is an unequal dependency enhances the power and control of the less dependent partner and correspondingly requires the more dependent partner to sacrifice a greater share of its autonomy in order to obtain the resources it needs. Interagency arrangements should therefore be based on mutual benefits, the acceptance of which does not require a great shift in the locus of power and control.

Economics of IOR

The "bottom line" for agency heads is whether or not the benefits of an IOR exceed the cost. This fact emphasizes the importance of the role that state agencies can play either in helping local agencies to discover the mutual benefits available to them as a result of sharing their resources or in providing external resource incentives. It also highlights the importance of evaluating both the anticipated costs and the benefits of a given collaboration. Costs frequently include sizable amounts of staff time and effort, which are often underestimated. Potential benefits include a range of resource-sharing possibilities, some of which have been suggested previously. It is often difficult to assign values to anticipated cost and benefit factors. However, the experiences of many collaborative efforts have been studied and offer insights into the value of various factors of exchange (e.g., Council for Interinstitutional Leadership 1979).

Role of Commitment

Commitment is the single most important requirement for an IOR but, despite rhetoric to the contrary, it does not seem to exist in isolation from potential institutional benefits, shared beliefs concerning the solutions to mutual problems and opportunities, and a high level of mutual trust and respect between the principals in the relationship. This fact is significant because it suggests that achievement of IOR is not confined to the realm of charismatic leadership, but that it may be achieved more widely if care is taken to create the context it requires.

Positive Climate

The development of mutual respect and trust between interagency personnel is also one of the essential conditions of an IOR, not only because it facilitates negotiations, but also because linking agencies agree--in effect--to share one another's reputations. Development of such attitudes is particularly difficult when there has been a history of noncooperation between the agencies. The breaking down of existing attitudinal barriers may require, as a beginning, improved dissemination of information on each agency's services and goals. An effective way to accomplish such dissemination would be for the state vocational education agency to publish and distribute information to local agencies on all human resource development opportunities and institutions in the state.

Positive attitudes towards cooperative efforts are also aided by the endorsement of professional associations and accrediting agencies. Linkages between health care education and health care-providing institutions provide excellent examples of these effects.

Coordination vs. Diversity

The findings of this study affirm the need for better coordination between vocational education and related service deliverers. However, little support is given to the notion of a tightly coupled, monolithic system of delivery. Needs for training and related services can be extremely diverse, depending on a host of individual background characteristics. These can best be served by a diversified but coordinated delivery system. This position is exemplified by a recent statement of the National Research Council (1983):

> in urging better coordination . . . we do not wish to remove all apparent redundancy. We believe that a diverse and decentralized system can better serve individuals' educational needs and respond more quickly to changes in the economy than could a monolithic education

system. We recommend coordination in order to ensure the existence of an appropriate array of schools and training centers with different approaches necessary to meet the educational and training objectives of a diverse population. (p. 72)

A Potpourri of Practical Suggestions

The findings of this study have led to the following conclusions and observations for those who would promote or seek to engage in interagency arrangements:

1. An organization considering an IOR should first identify its resource needs and then look to organizations with complementary needs as partners. Reciprocal benefit is best attained when organizations have complementary resource needs.

2. Mandates for IORs should be consistent for all member organizations. One type of member organization should not be required to participate while others are only encouraged to do so.

3. Organizations should clarify in advance areas of domain agreement and disagreement. It is much bet ter to begin with mutual understanding of major problem areas and to plan around them than to encounter them later when they can cause the arrangement to fail.

4. When building initial linkages, organizations should start with small efforts where cooperation has obvious benefits. This is particularly important where complex linkages are a longer-range objective. Small successes encourage commitment to tackle more difficult joint undertakings.

5. Areas of collaboration should be chosen in which the procedures and methods involved have been reasonably well standardized in each of the agencies or organizations involved. This promotes mutual understanding and effective communication.

6. Too much initial formalization shold be avoided. In the early stages, linkages need to be relatively flexible so that the partners can work out disruptions and dislocations with few constraints.

7. Attention should be paid to all levels of the organizations that will be affected by the linkage. Solid linkage develops when all levels and elements

of the linking organizations are able to intermesh with little dislocation. If linkage is only at the top while the secondary and tertiary levels find it difficult to work together, the relationship is not likely to continue.

8. Some conflict is inevitable. Procedures for handling and resolving conflicts should be established in advance.

Needs for Further Research

This study has suggested at least two areas of further research needed:

1. While many authors have reported instances of cooperation and coordination between vocational education and related service deliverers, this body of reporting has been of limited value as research because of the idiosyncratic nature of each case reported and the difficulty of generalization. Few have used an analytic framework derived from organizational theory or shared some other framework of analysis. The study reported here tested an analytic model using data from a single field site involving three dyadic relationships and reported findings on similar dyads found in the literature. Better understanding of these and other relationships involving vocational education agencies will require systematic collection and analysis of data specific to the relationship of interest. Justification for such an effort is contained in appendix B, which also describes a data collection and analysis plan.

2. IORs exist at various levels of intensity and stages of maturity. Further studies are needed to examine the evolution of relationships involving vocational education agencies and to better understand their maturation processes. Study of the historical development of such arrangements and the interaction processes that link structures to organizational interests should provide these explanations (Stern 1979).

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APPENDIX A

DATA FRAMEWORK FOR FIELD STUDY AND DATA SUMMARIES

DATA FRAMEWORK FOR FIELD STUDY

INTERVIEWS, OBSERVATIONS AND DOCUMENTS

Institutional Data

Name of Organizations or Institutions:	North Central Technical College and its articulated relationship with Pioneer Joint Vocational School	
Addresses:	North Central Technical College 2441 Kenwood Circle P.O. Box 698 Mansfield, Ohio 44901	Pioneer Joint Vocational School Central Ohio Industrial Park P.O. Box 309 Shelby, Ohio 44875
Telephone:	(419) 747-4999	(419) 347-7744

Data Sources: Dr. Warren Groff, Vice President for Academic Affairs, NCTC
Mr. Kenneth Berger, Director of Student Personnel Services, Pioneer JVS
Mr. John Reitz, Guidance Counselor, Pioneer JVS

Description of North Central Technical College:

North Central Technical College (NCTC) is a two-year, state-assisted college under the Ohio Board of Regents. The College is directed by a Board of Trustees elected from its service district of Ashland, Crawford, and Richland Counties. NCTC shares a campus with the regional Mansfield branch of Ohio State University, although each institution has its own faculty, curriculum, policies, and procedures.

Among the stated purposes of the College are the following:

1. To offer students programs and courses which serve the needs of the general community.
2. To offer associate degree programs in applied business, engineering, health and public service technologies and certificate programs which meet various job requirements.
3. To develop agreements with other institutions in areas such as advanced placement, experiential learning, and transfer credit.
4. To provide an opportunity for life-long learning by offering courses which meet needs such as skill upgrading, retraining, career change, redeveloping competencies, and advancement while encouraging personal and interpersonal effectiveness, values clarification, and human growth within the parameters established by associate degree and certificate programs.
5. To act as public education resource in the training of technicians, skilled craftsmen and para-professionals for business, industry, and the professions.

The College has identified collaborative relationships with over seventy organizations or institutions. The articulated, coordinated relationships examined in this study are with Pioneer Joint Vocational School, Mansfield General Hospital, and the Mid-Ohio Consortium for Industrial Training.

Description of Pioneer Joint Vocational School:

Pioneer Joint Vocational School serves a five county area providing vocational skill training skill training for 11th and 12th grade students. It draws from fourteen high schools in the district, attracting a student body of around 1,250 students. This is approximately 33 percent of all available junior and senior students. Pioneer offers 34 vocational programs. Of the students enrolled nearly 10 percent require Individual Educational Plans, while at the other end of the spectrum, 6 or 7 percent of the graduates go on for further training, primarily in two-year colleges.

Regularly enrolled students of high schools within the Pioneer Joint Vocational District are eligible to attend Pioneer if they have achieved proper grade rank and are in good standing at their parent school. Students participating in Pioneer's vocational education program graduate from their home community high school. They are eligible to participate in their parent school's athletic and extra curricular activities even though they spend their day at Pioneer JVS. They have the same privileges as nonvocational graduates to attend many of the state's colleges and universities if they so desire. Students attending Pioneer spend three hours a day in laboratory or shop experience in their elected vocational area plus one and one-half hours a day in related work in science, mathematics, etc. The rest of the school day is spent in academic subjects which are required for high school graduation.

The School also offers an Adult Evening Education Program, providing semester courses in the following five areas: job training programs, small business management, farm business planning and analysis, adult basic education, and general courses.

Description of the articulated relationship between North Central Technical College and Pioneer Joint Vocational School:

The Ohio Board of Regents stimulated articulation in 1977-78 by conducting meetings to encourage such linkages. The philosophical basis for linkage was incorporated in NCTC's strategic plan for functional relationships. Agencies with whom the College should establish articulated, coordinated efforts were identified, and strategies for achieving these linkages were developed. In 1980 NCTC followed the model established by the Dallas County Community College District for articulation between its colleges and high schools. The articulation in this model is based on achieved competencies and college credit is given for high school courses where the student has demonstrated the competencies required in the college course.

The articulation started with the Drafting program, and some students have gone on to NCTC and received credit for these courses. Pioneer instructors are on the Advisory Committee for NCTC's Drafting and Design program. The easiest mesh was in Data Processing where the two schools used the same text. The instructors met to work out the awarding of credit.

This receiving of credit at NCTC for high school courses is called the Advanced Standing Program. It is designed to reduce the possibility that high school graduates could duplicate course content during their college experience when they already had developed the required competency. Competencies that are required in several beginning college courses are outlined on an evaluation score card. As a high school student demonstrates proficiency in each of the competencies, his or her high school teacher signs the card. After all of the competencies have been met, the high school student or graduate can apply for advanced standing. To receive credit, the student must apply for admission. A total of 15 credits may be received in this way.

In Data Processing, if a high school student has received an "A" in a comparable course and the teacher at the high school has signed off on the required competencies, college credit may be awarded. If a student receives a "B" or "C," the student may take a proficiency examination, and if he or she passes the standard set by the division, credit will be granted. A fee is charged for taking proficiency exams.

Thus, there are two main ways for students at Pioneer Joint Vocational School to receive credit at NCTC for work taken at the JVS. They may receive advanced standing through demonstrating the competencies and achieving the required grade or through passing a proficiency examination administered by the College. Advanced standing requires extensive involvement of the high school teachers to sign off on the competencies, and also of the college teachers to analyze the courses and where necessary to interview the students applying for advanced standing for certain courses.

This system appears to be serving students, but to be somewhat cumbersome. Difficulties are worked out as they come up, and open and active communication appears to solve problems, with everyone striving to serve the best interests of the students.

Other programs at North Central Technical College where this articulation process is being implemented are Accounting, Electrical Engineering, Electronic Engineering, and Mechanical Engineering.

Situational Factors

1. *Resource Dependence (Need for external resources or other agencies to accomplish agency goals)*

   a. *What is the purpose of the relationship of your organization with _____ ?*

   Representatives of both the college and the JVS stated the purpose was to better serve students. The articulation agreement enables students going to NCTC to get credit. It recognizes the students success and achievement at Pioneer JVS.

   (1) How does it help your organization reach its goals?

   For the College, it translates its philosophical commitment into operational goals. For the JVS, it facilitates student understanding of possible futures, and helps attract students. It provides an incentive to the better students.

   b. *What are the elements of exchange?*

   Pioneer JVS students get college credits for a minimal processing charge, which saves time and expense, and get recognition for achievement. NCTC loses tuition, but gains quality JVS students, and builds community image. Interpersonal relations with staff members are very valuable for information interchange. Faculty members are on each other's program advisory committees.

   c. *To what extent is your organization dependent upon _____ to achieve your objectives?*

   Not at all 1 2 3 4 5 Very much

   The College placed this at 3.5. Stated that it makes the educational process more flexible, improves quality, and helps maintain standards.

   The JVS placed this down at 1, and stated that they do not rely on NCTC for most of what they do.

   d. *How important is your relationship with _____ to your organization?*

   Not at all 1 2 3 4 5 Very important

   The College representative placed this at 4.5, saying that interorganizational relationships are very important generally with a broad range of agencies, and Pioneer is simply one of these. Much of the initiative for this comes from NCTC.

   The JVS placed the importance rating at 2, saying there is some competition for adult training programs. The Pioneer representatives stated that they are much more dependent upon their home high schools for students, and that it is this relationship that they need to work harder on.

3. *Commitment (extent of dedication to making the IOR successful)*

a. *To what extent is your organization dedicated to making your relationship with _____ work?*

Not at all 1 2 3 4 (4.5) 5 *Very much*

There was a high rating by both parties of dedication to making the relationship work, with NCTC giving it a 4.5 rating, and Pioneer JVS a top 5 mark. At the JVS it is the Student Personnel Office that is dedicated to this relationship, at least they are the ones that operationalize this dedication.

b. *What are the visible and tangible elements of that dedication?*

A written document has been developed describing the articulated credit arrangement. NCTC loses some revenue in tuition and incurs some maintenance cost. The time of staff involved in developing the agreement and making it work at both the College at the JVS. Also, the time of faculty members at both institutions who serve on advisory committees of the other school. Many Pioneer JVS students attend NCTC Career Day.

c. *Who are the key actors in demonstrating that dedication and what roles do they play?*

The leadership and the time devoted by Dr. Warren Groff, V.P. for Academic Affairs at NCTC, and NCTC Division Director Breslin McKnight. At Pioneer JVS the Student Personnel Office is greatly involved, particularly the college advisor, John Reitz, and the Director of Student Personnel Services, Kenneth Berger. Faculty members are also involved in approving competencies in certain courses.

3. *Awareness (Knowledge of environmental needs, problems, or opportunities; knowledge of other agencies' goals and services; personal acquaintance of agency representatives)*

a. *How knowledgeable are the appropriate linking agents in your organization with the other organization in terms of:*

1) the need for working together

2) the opportunities for joint endeavors

3) its capabilities, services, and goals

Not at all 1 2 3 (4) 5 *Very knowledgeable*

Functional relationships is a goal category of NCTC. Requests to staff members to become more aware have never been turned down even though it is an "add on." Faculties from both institutions have met to learn what each is doing.

b. *To what extent are appropriate linking agents in your organization personally acquainted with key actors in the other organization?*

Not at all 1 2 3 (4) 5 *Very great extent*

The admissions people and the counselors know each other well. The instructors are becoming better acquainted. The Mid-Ohio Consortium has assisted in this.

c. *To what extent has a relationship of confidence and trust been developed between your organizations?*

None 1 2 3 4 (5) *Very great extent*

Representatives of both institutions felt that there was a high degree of trust. The areas that particularly stood out were admissions and the data processing program area.

4. *Consensus (Agreement between agencies on solutions to environmental needs or problems, and agreement on the services and goals of each)*

a. *Do you feel that your organization and _____ agree on the solution to the need being addressed by the two organizations' working together?*

Not at all 1 2 3 (4) 5 *Very great extent*

All parties ranked consensus or agreement around a "4." Strong agreement on the needs to be served, and they are working out the process. Both parties are educational institutions. The distinctions are those of level and focus. There is high degree of similarity.

b. *To what extent are the goals of _____ (as you understand them) compatible with your organization's goals?*

Not at all 1 2 3 (4) 5 *Very great extent*

All parties gave this a "4" or "4.5" ranking. All are in the process of training people for employment.

c. *Does your organization and _____ agree on who is to be served by working together, the services to be provided by each, and how they are to be delivered?*

Not at all 1 2 3 (4) 5 *Very great extent*

These are being worked out by each program area. Data processing would receive the highest rating; other program areas are being worked out.

5. *Domain Similarity (The degree of likeness of the goals, services, staff skills, and clients of the two organizations)*

a. *How similar are the goals of* _____ *to those of*

Both are educational institutions. The distinctions are those of level and focus. There is a high degree of similarity.

b. *How similar or different are the services of your two organizations?*

JVS ranking NCTC ranking

Very different 1 2 (3) 4 (4.5) 5 *Very similar*

Diagnosing student skills, planning, delivery of education, and placement are services of both. Pioneer JVS felt that NCTC has more resources for and does a better job of job placement.

c. *How similar or different are the competencies and skills of the staff members of your two organizations?*

Very different 1 2 (3.5) (4) 5 *Very similar*

Competence in content and teaching methods are needed by both. NCTC requires greater experience in skill and technical areas. The similarities and differences vary some by departments.

d. *How similar or different are the clients of your two organizations?*

JVS NCTC

Very different 1 (2) 3 (3.5) 4 5 *Very similar*

On the whole both organizations felt there was considerable difference in their clients, although in both cases they are students. The JVS gave a ranking of "2" and NCTC gave a ranking of "3.5." Pioneer JVS has students without a high school diploma and they are younger, of high school age usually. The average age of students at NCTC is 28. Some JVS students have lower scholastic achievement; about 10 percent have Individual Educational Plans (IEPS).

Structural Dimensions

1. *Formalization* *(The degree to which rules, policies, and procedures govern the relationship)*

   a. *How formalized are agreements between your organization and* _____ *?*

      1. *Verbal* (Yes, between working parties)

      2. *Written* (Yes, a credit arrangement on competencies achieve. Data Processing the most developed area.)

      3. *Legal*

      4. *Mandatory*, plus above

   b. *If there is a written agreement, how did it come about?*

      See the Overview on page 1 of the NCTC and Pioneer JVS relationship.

   c. *How formalized are the contacts between your two organizations/ Describe?*

      Not at all 1 2 (3) 4 5 *Very formal*

      The articulation arrangements are formal, but the contacts and meetings are informal. The Mid-Ohio Consortium meetings provide additional opportunities for interaction and communication.

   d. *What is the most common basis for the contacts between your two organizations?*

      1. *Required by law*

      2. *Formal agreement*

      (3.) *Common practice*

      (4.) *Specific need or problem*

      5. *Other* _____

   e. *If there are differences or problems between your organization and* _____ *, how are they handled?*

      Policy questions are handled at administrative levels; implementation at divisional level. Phone calls take care of most things.

2. *Centralization* *(Locus of power, influence, and decision-making)*

a. *How are the terms of your organization's joint efforts with _____ reached?*

Policy handled at administrative level.
Implementation decisions at the divisional (department) level.

Pioneer initiates most of the requests and with NCTC being the receiving institution, they have the final determination in the view of the JVS.

Completely by them	*Mostly by them*	*Mutually*	*Mostly by them*	*Completely by us*
1	*2*	(3)	*4*	*5*

b. *When representatives of your organization meet with _____ to discuss issues of mutual concern, how much influence does your organization have on the decisions reached?*

		JVS			NCTC	
None	*1*	(2)	*3*	*4*	(5)	*Very much*

The JVS would like a less formal agreement.

3. *Complexity (The number of different types of linkages connecting two organizations)*

   a. *What are the number and type of projects and tasks undertaken by your agency and _____?*

   Representatives of the two institutions listed the following:

   articulation agreements
   Career Day
   College Night
   developmental courses in chemistry and algebra
   financial aid workshops
   advisory committees
   special presentations in classes
   Mid-Ohio Consortium

4. *Structural Conflict (Conflict over the basis of consensus i.e., formalization)*

a. *To what extent do conflicting responsibilities or priorities characterize your organization's relationship to* _____ *?*

NCTC JVS

Not at all 1 (2) 3 4 5 *Very great extent*

Since the extent of collaboration is relatively small, the amount of conflict is small. The JVS saw the potential for conflict in adult education and upgrading and retraining services.

(1) What are these and how did they develop?

b. *To what extent has* _____ *attempted to interfere with the attainment of the goals of your agency in areas of overlapping interest?*

Never (1) 2 3 4 5 *Frequently*

Process Dimensions

1. *Resource Flows (Units of value transacted, i.e., funds, personnel, facilities, services, and clients)*

   a. *How frequently does your organization share, loan, or otherwise provide resources (funds, facilities, equipment, personnel, or clients) to _____ ?*

   The sharing is in the areas of personnel and clients. Some students take developmental classes at NCTC and others continue their education there. Personnel from both schools are involved in the process of articulation.

   b. *How frequently does _____ share, loan, or otherwise provide resources to your organization?*

   They occasionally share services. Also, admissions people from NCTC are at Pioneer JVS often. They share campuses for career events.

2. *Information Flows (Frequency, direction, and modes of communication between organizations)*

a. *How often are contacts made between your organization and _____ ?*

(1.) *Few times a year* — Administrative level

2. *Quarterly*

3. *Monthly*

(4.) *Weekly* — Implementation (operational) level

(5.) *Daily*

6. *More often (specify)* _____

b. *How are most of the contacts made?*

(1.) *Telephone*

2. *Letter/memo/report*

3. *Personally*

4. *Other* _____

c. *Who (which organization) most often initiates these contacts?*

(1.) *We do* — JVS

2. *They do*

(3.) *About equal* — NCTC

d. *How would you characterize the quality of communication between your organization and _____ ?*

Excellent (NCTC) Good (JVS). There was a very positive response on the part of all parties on the quality and tone of the communication.

e. *How important are the contacts with _____ to the work of your organization?*

Not at all 1 2 3 4 (5) *Extremely important*

3. *Procedural Conflict (Conflicts over interpretation and application of rules, principles, and procedures; disagreements over roles and performance of a particular position or unit)*

a. *To what extent do disagreements or disputes characterize the relations between your organization and _____ ?*

None (1) 2 3 4 5 *Very great extent*

No conflict now, but there is potential for conflict if vocational education and technical education compete with each other.

b. *How well are these differences worked out?*

Very poorly 1 2 3 4 (4.5) 5 *Very well*

c. *How are they worked out?*

d. *How compatible is your organization's operating philosophy with that of _____ ?*

Not at all 1 2 3 4 (5) *Very compatible*

Not in conflict.

Outcome Dimensions

1. *Effectiveness of Relationships (The perceived extent to which organizations carry out their commitments and believe that their relationships are worthwhile, equitable, productive, and satisfying)*

   a. *To what extent have both _____ and your organization fulfilled your commitments to the joint effort?*

   Not fulfilled 1 2 3 4 (4.5 5) *Fulfilled*

   (1) Explain

   Commitment is there. The efforts and results need to be continued.

   b. *To what extent has the arrangement between your organization and _____ been effective?*

   JVS NCTC

   Not at all 1 2 3 (4) (5) *Great extent*

   c. *To what extent has your organization benefitted from its relationship with _____ ?*

   None 1 2 3 4 (5) *Great extent*

   (1) In what ways?

   The students involved have benefitted very much. The faculty discussions on curriculum have been beneficial. Duplication of content has been reduced. There has been more efficient processing of students.

   (2) Have the benefits exceeded the costs?

   Yes. The only real cost has been the time of staff.

2. *Impact (Changes in the internal operations of organization's involved in the relationship)*

   a. *What changes have been made in the internal operations of your organization as a result of your organization's relationship (arrangement) with _____ ?*

      Both schools have achieved a greater specificity of competencies within their curricula, and have made some minor curriculum changes.

   b. *Have these been positive, beneficial changes?*

      Yes.

Extra Dimensions

1. *Critical Elements*

   a. *Are there unique or special factors that contributed to the success or problems in this relationship?*

   b. *What are the critical elements for success in the relationship?*

      The need for articulation and the philosophies of the institutions are important elements. This was then translated into policy and the written agreement. The personal involvement of key individuals provided leadership and set the tone. Getting teachers involved was essential in implementation.

What is the relative importance of the following factors to your relationship with _____ .

1	*mutual benefits/exchanges*
2	*formal agreements*
N/A	*access to external resources or governance opportunities*
N/A	*mandates to collaborate*
_____	*(other)* _____

DATA FRAMEWORK FOR FIELD STUDY

INTERVIEWS, OBSERVATIONS AND DOCUMENTS

Institutional Data

Name of Organizations or Institutions: North Central Technical College and its coordinated relationship with Mansfield General Hospital

Addresses:

North Central Technical College
2441 Kenwood Circle
P.O. Box 698
Mansfield, Ohio 44901

Mansfield General Hospital
335 Glessner Avenue
Mansfield, Ohio 44901

Telephone: (419) 747-4999 (419) 522-3411

Data Source:

Dr. Warren Groff, V.P. for Academic Affairs, NCTC
Charlet J. Grooms, R.N., Director of Nursing Department, NCTC
Philip L. Wisdom, President, Mansfield General Hospital
Shirley Meiners, Vice President for Nursing, MGH
James Meyer, Vice President for Operations, MGH
Pearl Keib, Director of Personnel Development, MGH
Norman Plaster, Radiological Technology Service, MGH
James Wareham, Respiratory Therapy, MGH

Description of North Central Technical College:

North Central Technical College (NCTC) is a two-year, state assisted college under the Ohio Board of Regents. The College is directed by a Board of Trustees elected from its service district of Ashland, Crawford, and Richland Counties. NCTC shares a campus with the regional Mansfield branch of Ohio State University, although each institution has its own faculty, curriculum, policies, and procedures.

Among the stated purposes of the College are the following:

1. To offer students programs and courses which serve the needs of the community.
2. To offer associate degree programs in applied business, engineering, health and public service technologies and certificate programs which meet various job requirements.
3. To develop agreements with other institutions in areas such as advanced placement, experiential learning, and transfer credit.
4. To provide an opportunity for life-long learning by offering courses which meet needs such as skill upgrading, retraining, career change, redeveloping competencies, and advancement while encouraging personal and interpersonal effectiveness, values clarification, and human growth within the parameters established by associate degree and certificate programs.
5. To act as public education resource in the training of technicians, skilled craftsmen and paraprofessionals for business, industry, and the prefessions.

The College has identified collaborative relationships with over seventy organizations or institutions. The articulated, coordinated relationships examined in this study are with Pioneer Joint Vocational School, Mansfield General Hospital, and the Mid-Ohio Consortium for Industrial Training.

Description of the Mansfield General Hospital:

Founded in 1902, Mansfield General Hospital has grown to a 408-bed medical center serving a six-county area of north central Ohio with a population of more than 250,000. Nearly every kind of health care service is provided at the hospital from delicate neurological surgery to the most sophisticated diagnostic procedures. In a typical year nearly 20,000 persons will be admitted, more than 35,000 will be treated in the emergency rooms, 7,500 surgical procedures will take place in the operating rooms, and 1,500 babies will be born. During a typical year, more than 800,000 laboratory tests and procedures will be performed, nearly 65,000 X-ray examinations carried out, and more than 600,000 meals served.

The hospital's facilities have been continually expanded over the years to keep pace with the growing demand for services. Mansfield General is currently embarking on its largest building project in its history. The new building construction includes a surgery and recovery room area, emergency room, intensive care units, maternity, delivery and nursey areas, material management, patient care units, and a new main entrance and lobby. Existing facilities are also being renovated.

The hospital maintains its own three-year nursing school to prepare students for careers as registered nurses. This is in addition to its cooperative endeavor with North Central Technical College where they provide the clinical environment for the College's Associate Degree (2 year) nursing program and its Licensed Practical Nursing Program. The hospital provides well equipped clinical facilities for students in radiology, respiratory therapy, medical technology, and electroencephalography.

Description of the coordinated relationship between North Central Technical College and Mansfield General Hospital:

The College has two nursing programs with MGH, even though the Hospital has its own three-year nursing program. NCTC needed NGH as a clinical training facility for its Associate Degree Nursing program and initiated the request to MGH. The Hospital was interested because they had a much lower turnover of NCTC trained nurses. The first clinical training area established was Pediatrics, and the other clinical areas for training were soon added. The second program, Licensed Practical Nursing, was taken over by the College from another organization in 1978 and NCTC continued to use MGH as the clinical facility for it.

The Respiratory Therapy program began at the College in 1978. There is a one year (four quarter) Certificate program. There are four clinical sites with Mansfield General Hospital being by far the largest. The head of theprogram serves as the clinical instructor at MGH, and there is another instructor for the clinical site in Ashland, and one in Marion. The Respiratory Therapy program takes in 25 students and graduates 16 or so. Seventy-five percent of the staff in Respiratory Therapy at MGH are graduates of the NCTC program.

The Radiological Technology Program was started at the College about 12 years ago. Prior to that the Hospital did its own training. It is now a two-year Associate Degree program. There are two technologists on the staff at the College. MGH pays the salary of one of the instructors, although this person is an employee of the College. The American Society of Radiological Technologists require 2400 hours of clinical instruction as a minimum, and limit the number of students in the program to nine first year students and nine second year students. There are twenty-three Registered Radiological Technologists on the staff at MGH. By providing the clinical experience, the Hospital is able to select the best of the graduates as employees.

All four of the above described programs have written agreements between North Central Technical College and Mansfield General Hospital.

Situational Factors

1. *Resource Dependence (Need for external resources or other agencies to accomplish goals)*

   a. *What is the purpose of the relationship of your organization with _____?*

   Both institutions need each other to provide good training to develop good medical (health) employees, and the relationship eases the financial pressures.

   (1) How does it help your organization reach its goals?

   It enables the College to provide good clinical experience for its students, which then enables the Hospital to hire well qualified employees. As the MGH president stated, "Quality patient care requires quality personnel." Accreditation depends upon personnel qualifications.

   b. *What are the elements of exchange?*

   Hospital provides: (1) experience, (2) helps College develop and change program, (3) sets standards of performance, (4) real world experience, (5) funds full time Radiological instructor, (6) equipment in the clinical setting, (7) teaching tools.

   College provides: (1) updating to hospital personnel, (2) ideal, (3) graduates of the program, (4) enthusiasm of learners, (5) creates an environment that is better for the hospital patients, (6) ninety percent of new hires are from these programs.

   c. *To what extent is your organization dependent upon _____ to achieve your objectives?*

   Not at all 1 2 3 4 (5) *Very much*

   d. *How important is your relationship with _____ to your organization?*

   Not at all 1 2 3 4 (5) *Very much*

   Objectives of the ADN program could be met by another cooperating site, but this is not so for the other programs. For these, it is absolutely essential.

2. *Commitment (extent of dedication to making the IOR successful)*

a. *To what extent is your organization dedicated to making your relationship with _____ work?*

Not at all 1 2 3 4 (5) *Very much*

All parties expressed high dedication to making the relationship work.

b. *What are the visible and tangible elements of that dedication?*

Written contracts between the two organizations.
Personal relationships between key persons in the two organizations.
Letter from president of MGH stating NCTC can use two hospitals units each quarter for the two nursing programs.
MGH picks up the rubella screeing for nursing students.
MGH pays the salary of one Radiological Technology instructor.
Efforts in coordination by persons in both organizations, which are time consuming.
The cooperation of the MGH medical staff, permeating all levels.

c. *Who are the key actors in demonstrating that dedication and what roles do they play?*

Cooperation starts at the top and goes on down:

NCTC	MGH
President	President
V.P. of Academic Affairs	V.P. for Business and Finance
Director of Nursing Program	V.P. for Nursing
V.P. for Business and Finance	Director of Staff Development
Coordinator of Radiologic Technology	Head of Radiologic Department
Coordinator of Respiratory Therapy Technology	Head of Respiratory Therapy Department

3. *Awareness (Knowledge of environmental needs, problems, or opportunities; knowledge of other agencies' goals and services; personal acquaintance of agency representatives)*

a. *How knowledgeable are the appropriate linking agents in your organization with the other organization in terms of:*

1) *the need for working together*

2) *the opportunities for joint endeavors*

3) *its capabilities, services, and goals*

NCTC MGH

Not at all 1 2 3 (4) (5) *Very knowledgeable*

All stated that key people had high awareness and were very knowledgeable. Greatest awareness at the individual program level.

b. *To what extent are appropriate linking agents in your organization personally acquainted with key actors in the other organization?*

Not at all 1 2 3 4 (5) *Very great extent*

There was agreement by all that key actors in both organizations were personally acquainted to a very great extent.

c. *To what extent has a relationship of confidence and trust been developed between your organizations?*

None 1 2 3 4 (5) *Very great extent*

All parties said there was a very strong relationship of trust and confidence.

4. *Consensus (Agreement between agencies on solutions to environmental needs or problems, and agreement on the services and goals of each)*

a. *Do you feel that your organization and _____ agree on the solution to the need being addressed by the two organizations' working together?*

NCTC MGH

Not at all 1 2 3 (4) (5) *Very great extent*

Depends on the problem being dealt with. Requires lots of give and take. Both are interested in turning out a quality trained person. Health education (continuing education) is also a goal of MGH. Both feel community commitment.

b. *To what extent are the goals of _____ (as you understand them) compatible with your organization's goals?*

NCTC MGH

Not at all 1 2 3 (4) (5) *Very great extent*

The goals are different, but compatible. Hospital exists for providing patient care, while NCTC exists for providing educational services.

c. *Does your organization and _____ agree on who is to be served by working together, the services to be provided by each, and how they are to be delivered?*

NCTC

Not at all 1 2 3 (4) 5 *Very great extent*

This is spelled out clearly in the written agreements, particularly the responsibilities of each. However, there are always things to work out.

5. *Domain Similarity (The degree of likeness of the goals, services, staff skills, and clients of the two organizations)*

a. *How similar are the goals of* _____ *to those of your organization?*

Both are interested in turning out a quality trained person. Health education (continuing education) is also a goal of MGH. Both feel community commitment. Both recognize the need to change. Both have external authorities (accreditation agencies), and are nonprofit.

b. *How similar or different are the services of your two organizations?*

Very different (1) 2 3 4 5 *Very similar*

The services are different in that the College provides educational services while the Hospital provides patient care and health services.

c. *How similar or different are the competencies and skills of the staff members of your two organizations?*

NCTC MGH

Very different 1 2 3 (4) (5) *Very similar*

All parties saw a high degree of similarity. Both must be competent practitioners as well as teachers. Many of the College's instructors are former Hospital employees. There are also similarities in the support structures (administration) of the two.

d. *How similar or different are the clients of your two organizations?*

Very different (1) 2 3 4 5 *Very similar*

All said that the clients are very different. The College has students and the Hospital serves patients.

Structural Dimensions

1. *Formalization (The degree to which rules, policies, and procedures govern the relationship)*

   a. *How formalized are agreements between your organization and _____?*

      1. *Verbal*

      (2.) *Written*

      3. *Legal*

      4. *Mandatory, plus above*

   b. *If there is a written agreement, how did it come about?*

      A written agreement is required by accrediting bodies on both sides. The College wrote the initial agreement draft for each technology. Each year it is jointly reviewed and updated. They jointly decide what is needed.

   c. *How formalized are the contacts between your two organizations? Describe.*

	NCTC		MGH		
Not at all	(1)	2	(3)	4	5 *Very formal*

      Although they chose different ranking numbers, all said that the contacts were usually informal, with few formal meetings. The relationship is under a formal agreement, but the contacts are informal.

   d. *What is the most common basis for the contacts between your two organizations?*

      1. *Required by law*

      2. *Formal agreement*

      (3.) *Common practice*

      (4.) *Specific need or problem*

      5. *Other* _____

   e. *If there are differences or problems between your organization and _____, how are they handled?*

      They are worked out between appropriate operational persons in each organization.

2. *Centralization (Locus of power, influence, and decision-making)*

a. *How are the terms of your organization's joint efforts with _____ reached?*

Completed by them	*Mostly by them*	*Mutually*	*Mostly by us*	*Completely by them*
1	*2*	(*3*)	*4*	*5*

There was general agreement by both organizations that terms were mutually reached, except that in Nursing the Hospital felt that they had the greatest say.

b. *When representatives of your organization meet with _____ to discuss issues of mutual concern, how much influence does your organization have on the decisions reached?*

None *1* *2* *3* *4* *5* *Very much*

The influence varies on a program by program basis. In the hospital environment, NCTC lacks the power of status, but has the power of information. The reputation of NCTC graduates provides a bargaining chip. The amount of influence depends on the type of problem under discussion. NCTC has the most influence on educational decisions, and MGH the most influence on clinical decisions.

3. *Complexity (The number of different types of linkages connecting two organizations)*

a. *What are the number and type of projects and tasks undertaken by your agency and _____?*

Four major programs: Associate Degree Nursing (ADN)
Licensed Practical Nursing (LPN)
Radiological Technology
Respiratory Therapy Technology

Continuing education programs offered both the Hospital and the College

NCTC faculty on MGH committees.

MGH staff on NCTC program advisory committees

Clinical site for various other NCTC classes field trips (mental health, recreational therapy, communications department)

Hospital professionals serve as speakers in some NCTC classes

Richland County Health Planning Development Council

4. *Structural Conflict (Conflict over the basis of consensus i.e., formalization)*

a. *To what extent do conflicting responsibilities or priorities characterize your organization's relationship to _____?*

NCIC MGH

Not at all (1) 2 (3) 4 5 *Very great extent*

1) *What are these and how did they develop?*

Although the rankings were different, the statements of the situation were the same. At the Hospital the basic responsibility is to the patient, while at the College the basic responsibility is to the student. The Hospital has some difficulty in having sufficient space to accommodate students and instructors. However, they felt that different missions, does not mean conflict. The potential is there, but realistic expectations keep it low.

b) *To what extent has _____ attempted to interfere with the attainment of the goals of your agency in areas of overlapping interest?*

Never (1) 2 3 4 5 *Frequently*

All parties rated this at the lowest level, even though MGH also has a three-year nursing program.

Process Dimensions

1. *Resource Flows (Units of value transacted, i.e., funds, personnel, facilities, services, and clients)*

   a. *How frequently does your organization share, loan, or otherwise provide resources (funds, facilities, equipment, personnel, or clients) to _____?*

   Continuous flow on both sides.

   NCTC faculty supervises students at the hospital.

   Graduates of all four shared programs flow to the Hospital.

   Students do patient care for educational purposes.

   b. *How frequently does _____ share, loan, or otherwise provide resources to your organization?*

   Continuous flow on both sides.

   The Hospital provides the clinical training facility.

   Pays the salary of one full time Radiologic instructor.

   Provides lunches for student trainees.

2. *Information Flows (Frequency, direction, and modes of communication between organizations)*

a. *How often are contacts made between your organization and _____?*

1. *Few times a year*
2. *Quarterly*
3. *Monthly*
(4.) *Weekly*
(5.) *Daily*
6. *More often (specify)* _____

b. *How are most of the contacts made?*

(1.) *Telephone*
2. *Letter/memo/report*
(3.) *Personally*
4. *Other* _____

c. *Who (which organization) most often initiates these contacts?*

(1.) *We do* NCTC
2. *They do*
(3.) *About equal* MGH

d. *How would you characterize the quality of communication between your organization and _____?*

Excellent and productive.

e. *How important are the contacts with _____ to the work of your organization?*

Not at all 1 2 3 4 (5) *Extremely important*

All agreed that the contacts are extremely important.

3. *Procedural Conflict (Conflicts over interpretation and application of rules, principles, and procedures; disagreements over roles and performance of a particular position or unit)*

a. *To what extent do disagreements or disputes characterize the relations between your organization and _____ ?*

None (1) 2 3 4 5 *Very great extent*

Only minor clarification questions.

b. *How well are these differences worked out?*

Very poorly 1 2 3 4 (5) *Very well*

All agreed that the differences are worked out very well. These minor problems often involve personality conflicts between students and hospital personnel, rather than policy questions.

c. *How are they worked out?*

They are worked out through personal contact on an individual basis.

d. *How compatible is your organization's operating philosophy with that of _____ ?*

Not at all 1 2 3 4 (5) *Very compatible*

There was unanimous agreement on very high compatibility.

Outcome Dimensions

1. *Effectiveness of Relationships (The perceived extent to which organizations carry out their commitments and believe that their relationships are worthwhile, equitable, productive, and satisfying)*

   a. *To what extent have both _____ and your organization fulfilled your commitments to the joint effort?*

   Not fulfilled 1 2 3 4 (5) *Fulfilled*

   (1) Explain

   All parties felt that commitments had been fulfilled.

   b. *To what extent has the arrangement between your organization and _____ been effective?*

   Not at all 1 2 3 4 (5) *Great extent*

   There was unanimous agreement that the arrangement had been effective to a very great extent.

   c. *To what extent has your organization benefitted from its relationship with _____ ?*

   None 1 2 3 4 (5) *Great extent*

   (1) In what ways?

   For the College, it enabled their students to get good experience in a clinical setting. It was the only feasible place for them to get their pediatrics clinical training. For the hospital, it enabled them to get good employees (facilitated recruitment), and also provided growth for their own employees.

   (2) Have the benefits exceeded the costs?

   All provided a resounding "Yes." As they said, "It certainly does or we would not be involved."

2. *Impact (Changes in the internal operations of organizations involved in the relationship)*

   a. *What changes have been made in the internal operations of your organization as a result of your organization's relationship (arrangement) with _____ ?*

   The College had to make some scheduling changes (reassignment of clinical days at the hospital). The College has become more conscious of the importance of functional relationships with other agencies. It has help set an internal climate and awareness for interorganizational relationships.

   At the Hospital as a whole, the changes are minor organizationally, but responsibilities of individuals are different. Having student nurses frees other personnel to do other things. This is cost effective. Radiologic Technology has had to learn that they cannot depend on students to do the work, i.e., that education comes first.

   b. *Have these been positive, beneficial changes?*

   On the whole there was the feeling that the changes were all right. However, the College mentioned that the scheduling changes have sometimes involved students obtaining clinical experience in undesirable time slots.

Extra Dimensions

1. *Critical Elements*

   a. *Are there unique or special factors that contributed to the success or problems in this relationship?*

      Mutual needs met

   b. *What are the critical elements for success in the relationship?*

      1. Needs on the part of both met by working together
      2. Written agreements, reviewed annually (mandated)
      3. Personal involvement by key individuals
      4. Commitment to making it work
      5. Dedication
      6. Good communication
      7. Love of education by both parties

What is the relative importance of the following factors to your relationship with _____ .

1	*mutual benefits/exchanges*
2	*formal agreements*
N/A	*access to external resources or governance opportunities*
N/A	*mandates to collaborate**
3	*(Other)* Personal involvement of key individuals

**Mandate is to provide clinical experience, which is involved in #1.*

DATA FRAMEWORK FOR FIELD STUDY

INTERVIEWS, OBSERVATIONS AND DOCUMENTS

Institutional Data

Name of Organizations or Institutions: North Central Technical College and its linked relationship with the Mid-Ohio Consortium for Industrial Training

Addresses:

North Central Technical College
2441 Kenwood Circle
P.O. Box 698
Mansfield, Ohio 44901

Mid Ohio Consortium
North Central Technical College
Ohio State University-Mansfield
P.O. Box 698
Mansfield, Ohio 44901-0698

Telephone: (419) 747-4999 (419) 522-3411

Data Source: Dr. Henry Fallerius, President, NCTC
Dr. Virginia C. Clay, Executive Director, Mid-Ohio Consortium

Description of North Central Technical College:

North Central Technical College (NCTC) is a two-year state assisted college under the Ohio Board of Regents. The College is directed by a Board of Trustees elected from its service district of Ashland, Crawford, and Richland Counties. NCTC shares a campus with the regional Mansfield branch of Ohio State University, although each institution has its own faculty, curriculum, policies, and procedures.

Among the stated purposes of the College are the following:

1. To offer students programs and courses which serve the needs of the community.
2. To offer associate degree programs in applied business, engineering, health and public service technologies and certificate programs which meet various job requirements.
3. To develop agreements with other institutions in areas such as advanced placement, experiential learning, and transfer credit.
4. To provide an opportunity for life-long learning by offering courses which meet needs such as skill upgrading, retraining, career change, redeveloping competencies, and advancement while encouraging personal and interpersonal effectiveness, values clarification, and human growth within the parameters established by associate degree and certificate programs.
5. To act as public education resource in training of technicians, skilled craftsmen and paraprofessionals for business, industry, and the professions.

The College has identified collaborative relationships with over seventy organizations or institutions. The articulated, coordinated relationships examined in this study are with Pioneer Joint Vocational School, Mansfield General Hospital, and the Mid-Ohio Consortium for Industrial Training.

Description of the Mid-Ohio Consortium for Industrial Training:

The purpose of this Consortium is to encourage cooperation of business, industry, and public education, to foster economic stability and growth of the area through job training. It is sponsored and funded through a cooperative effort between the State Department of Education, Division of Vocational Education, and the Department of Development.

The Consortium's programs for business and industry emphasize customized job training, human resource development, increased productivity, and improved management efficiency.

The organization was formed in 1981, at which time the executive director was hired. A constitution was adopted which allows for a division of labor among three standing committees. The Executive Committee is a decision-making body consisting of representatives of each public institution which provides job training, along with the officers of the Consortium. The Advisory Committee is composed of representatives of industry, chambers of commerce, and educators regarding Consortium activities. The Training Committee acts as a resource to aid the executive director when planning programs to meet individual company's needs.

The Mid-Ohio Consortium serves the area of Richland, Ashland, West Homes, and East Morrow counties. The active participants in the Consortium are the Bucyrus Chamber of Commerce, Richland Economic Development Corporation, Ashland Chamber of Commerce, Pioneer Joint Vocational School, Ashland-West Holmes Joint Vocational School, Madison Local Schools, Mansfield City Schools, North Central Technical College, Ohio State University-Mansfield, and industry representatives from each community.

For companies to be eligible for Vocational Education and Department of Development funds, they must invest in capital equipment and/or create new jobs. There is a limited amount available under restrictive criteria to help retain industry (to help it survive).

Description of the linked relationship between North Central Technical College and the Mid-Ohio Consortium for Industrial Training:

The president of NCTC, Dr. Henry Fallerius, was involved in the forming of the Consortium, and has been very supportive. The College houses the Consortium and provides and office and secretarial help for the Consortium executive director. The College is represented on all three Consortium standing committees: Executive Committee, Advisory Committee, and Training Committee. Pioneer Joint Vocational School is the fiscal agent for the Consortium.

The College has been engaged in funded training endeavors through the Consortium. It currently is involved in providing training in electronics for Fisher Body.

Situation Factors

1. *Resource Dependence (Need for external resources or other agencies to accomplish agency goals)*

   a. *What is the purpose of the relationship of your organization with _____ ?*

   Goals are to serve new and expanding industry, as well as to help struggling existing industry, by providing training (subsidized or not).

   (1) How does it help your organization reach its goals?

   College's goals include outreach into the community to provide facilities and human resources to meet community training needs.

   b. *What are the elements of exchange?*

   From the Consortium: (1) good public relations, (2) identifies training needs, (3) communication link between industry and the College, (4) economic development worker training funds

   From the College: (1) office, (2) secretarial help, (3) training and retraining services for companies

   c. *To what extent is your organization dependent upon _____ to achieve your objectives?*

   Not at all 1 2 3 4 5 *Very much*

   NCTC says rather small, but fits the mission of the College.

   d. *How important is your relationship with _____ to your organization?*

   M-OC

   Not at all 1 2 3 4 (5) *Very important*

   NCTC has an excellent reputation in the area.

2. *Commitment (extent of dedication to making the IOR successful)*

a. *To what extent is your organization dedicated to making your relationship with _____ work?*

Not at all 1 2 3 4 (5) *Very much*

Both parties stated high level of dedication.

b. *What are the visible and tangible elements of that dedication?*

NCTC's president's active participation; the office, telephone, and support services provided. The time and effort the Consortium executive director spends doing the job and working with NCTC.

c. *Who are the key actors in demonstrating that dedication and what roles do they play?*

President of NCTC.
Consortium has access to appropriate persons on the campus.
The Executive Director of the Consortium, Virginia Clay.
The President of the Consortium (he is from industry).

3. *Awareness (Knowledge of environmental needs, problems, or opportunities; knowledge of other agencies' goals and services; personal acquaintance of agency representatives)*

a. *How knowledgeable are the appropriate linking agents in your organization with the other organization in terms of:*

1) *the need for working together*

2) *the opportunities for joint endeavors*

3) *its capabilities, services, and goals*

Not at all 1 2 3 4 5 *Very knowledgeable*

Most knowledgeable at the division head level and above.

b. *To what extent are appropriate linking agents in your organization personally acquainted with key actors in the other organization?*

Not at all 1 2 3 4 (5) *Very great extent*

All College administrators know the Consortium executive director well, also some faculty.

c. *To what extent has a relationship of confidence and trust been developed between your organizations?*

M-OC NCTC

None 1 2 3 (4) (5) *Very great extent*

The Consortium Board (this includes Dr. Fallerius) thinks very highly of the Consortium executive director.

The Consortium executive director thought the relationship with the College to be good, but expects it to grow.

4. *Consensus (Agreement between agencies on solutions to environmental needs or problems, and agreement on the services and goals of each)*

a. *Do you feel that your organization and _____ agree on the solution to the need being addressed by the two organizations' working together?*

Not at all 1 2 3 4 5 *Very great extent*

b. *To what extent are the goals of _____ (as you understand them) compatible with your organization's goals?*

Not at all 1 2 3 4 (5) *Very great extent*

The Consortium director acknowledged that a lot of this may be due to the fact that she comes to this position from higher education.

c. *Does your organization and _____ agree on who is to be served by working together, the services to be provided by each, and how they are to be delivered?*

Not at all 1 2 3 4 (5) *Very great extent*

The NCTC president and the Consortium direction agree highly. At the faculty level, it is much lower.

On questions of who is to deliver the training, the Consortium Training Committee and Executive Board resolve these questions in coordination with the Consortium director.

5. *Domain Similarity (The degree of likeness of the goals, services, staff skills, and clients of the two organizations)*

a. *How similar are the goals of* _____ *to those of your organization?*

The College president felt that the goals, services, and staff skills were very similar, particularly with NCTC's Continuing Education programs and Off-campus programs.

The Consortium director felt some dissimilarity because of the populations served. The College's primary clients are students, while the Consortium's primary clients are companies.

b. *How similar or different are the services of your two organizations?*

Very different 1 2 (3) 4 5 *Very similar*

All parties indicated a "3" rating.
The Consortium provides a consulting service, while the college sells Continuing Education.

c. *How similar or different are the competencies and skills of the staff members of your two organizations?*

Very different 1 2 3 4 (5) *Very similar*

Dr. Fallerius considers College staff to be the Consortium director's staff. Also, the Consortium director has a Ph.D. in Higher Education Administration and has taught five years in higher education.

d. *How similar or different are the clients of your two organizations?*

NCTC M-OC

Very different 1 (2) (3) 4 5 *Very similar*

There is an age and culture difference. Typically, Consortium clients are blue collar workers. Also, an age difference.

Structural Dimensions

1. *Formalization (The degree to which rules, policies, and procedures govern the relationship*

   a. *How formalized are agreements between your organization and _____?*

      1. *Verbal*

      (2.) *Written*

      3. *Legal*

      4. *Mandatory, plus above*

   b. *If there is a written agreement, how did it come about?*

      The Executive Committee of the Consortium and the president of the College felt it would be better to have a written agreement.

   c. *How formalized are the contacts between your two organizations? Describe.*

      Not at all 1 2 (3) 4 5 *Very formal*

      Scheduled meetings are a formal contact. As needs arise, formal meetings and contacts are made. There is also a lot of informal project contact.

   d. *What is the most common basis for the contacts between your two organizations?*

      1. *Required by law*

      2. *Formal agreement*

      3. *Common practice*

      (4.) *Specific need or problem*

      5. *Other* _____

   e. *If there are differences or problems between your organization and _____, how are they handled?*

      If there are differences, they are usually handled directly by the principles involved. Other problems are handled by the Executive Committee of the Consortium which includes the NCTC president.

2. *Centralization (Locus of power, influence, and decision-making)*

a. *How are the terms of your organization's joint efforts with _____ reached?*

Terms are usually reached by discussion by the parties involved. In determining which training institution gets the training project, there is sometimes little flexibility if the company involved wants a particular school or college. Once a training project is assigned, terms are discussed and agreed to mutually.

Completely by them	*Mostly by them*	*Mutually*	*Mostly by us*	*Completely by us*
1	*2*	(*3*)	*4*	*5*

b. *When representatives of your organization meet with _____ to discuss issues of mutual concern, how much influence does your organization have on the decisions reached?*

None 1 2 3 4 5 *Very much*

The Consortium director felt there was strong influence with the NCTC president and lower influence with faculty members. The College president felt decisions were reached through a participative management approach.

3. *Complexity (The number of different types of linkages connecting two organizations)*

a. *What are the number and type of projects and tasks undertaken by your agency and* _____ *?*

Ranges from minor to major. Examples are:

Mansfield Typewriter Company--electronics training (company paid the full bill)

Fisher Body--1st phase, electronics training (also, serving as the fiscal agent for this project)

R. R. Donnelly--written and oral communications for supervisors (credit will be given)

There is a variety within the context of the College's mission.

4. *Structural Conflict (Conflict over the basis of consensus i.e., formalization)*

a. *To what extent do conflicting responsibilities or priorities characterize your organization's relationship to _____?*

Not at all 1 (2) 3 4 5 *Very great extent*

All parties gave a "2" ranking, stating there is no conflict administratively, but some programmatically.

(1) *What are these and how did they develop?*

The Ohio Technology Transfer Organization (OTTO) and the Consortium sometimes conflict over whose domain it is in working with certain companies. Sometimes the Consortium and NCTC's Continuing Education department seem to be in competition in providing services. These are worked out on a one to one basis.

b. *To what extent has _____ attempted to interfere with the attainment of the goals of your agency in areas of overlapping interest?*

M-OC NCTC

Never (1) (2) 3 4 5 *Frequently*

NCTC felt there was occasionally an unintentional overlap with Continuing Education.

Process Dimensions

1. *Resource Flows (Units of value transacted, i.e., funds, personnel, facilities, services, and clients)*

   a. *How frequently does your organization share, loan, or otherwise provide resources (funds, equipment, personnel, or clients) to _____ ?*

   There is a continual College support to the Consortium through the provision of office space, telephone, and support secretarial services.

   There is flow from the Consortium whenever a funded training project is assigned to the College.

   In one instance the Consortium funded a NCTC faculty member trip to Cincinnati.

   b. *How frequently does _____ share, loan, or otherwise provide resources to your organization?*

   The office and support services provided by the College to the Consortium are ongoing.

   Dr. Fallerius felt that NCTC is one of the more frequent receivers of projects from the Consortium because it is a technical training institution.

2. *Information Flows (Frequency, direction, and modes of communication between organizations)*

a. *How often are contacts made between your organization and _____ ?*

1. *Few times a year*
2. *Quarterly*
3. *Monthly*
4. *Weekly* (circled)
5. *Daily*
6. *More often (specify)* _____

b. *How are most of the contacts made?*

1. *Telephone* (circled)
2. *Letter/memo/report*
3. *Personally* (circled)
4. *Other* _____

c. *Who (which organization most often initiates these contacts?*

1. *We do*
2. *They do* — The Consortium director initiates most of the contacts
3. *About equal*

d. *How would you characterize the quality of communication between your organization and _____ ?*

High, explicit, to-the-point.

e. *How important are the contacts with _____ to the work of your organization?*

NCTC M-OC

Not at all 1 (2) 3 4 (5) *Extremely important*

3. *Procedural Conflict (Conflicts over interpretation and application of rules, principles, and procedures; disagreements over roles and performance of a particular position or unit)*

a. *To what extent do disagreements or disputes characterize the relations between your organization and _____ ?*

None (1 2) 3 4 5 *Very great extent*

Very little

b. *How well are these differences worked out?*

NCTC M-OC

Very poorly 1 2 (3) 4 (5) *Very well*

Worked out satisfactorily.

c. *How are they worked out?*

Involved parties either sit down and talk about it, or it is handled by the Consortium Executive Committee.

d. *How compatible is your organization's operating philosophy with that of _____ ?*

Not at all 1 2 3 4 (5) *Very compatible*

Outcome Dimensions

1. *Effectiveness of Relationships (The perceived extent to which organizations carry out their commitments and believe that their relationships are worthwhile, equitable, productive, and satisfying)*

   a. *To what extent have both _____ and your organization fulfilled your commitments to the joint efforts?*

   Not fulfilled 1 2 3 (4) M-OC (5) NCTC *Fulfilled*

   (1) Explain

   Consistently high

   b. *To what extent has the arrangement between your organization and _____ been effective?*

   Not at all 1 2 3 (4) NCTC (5) M-OC *Great extent*

   c. *To what extent has your organization benefitted from its relationship with _____ ?*

   None 1 2 (3) NCTC 4 (5) M-OC *Great extent*

   (1) In what ways?

   The College has benefitted from conducting projects assigned to it, and it has helped in institutional marketing.

   The Consortium director stated that the Consortium is nothing without the institutions that compose it.

   (2) Have the benefits exceeded the costs?

   The commitment to the College's role in economic development is what drives it.

2. *Impact (Changes in the internal operations of organization's involved in the relationship)*

   a. *What changes have been made in the internal operations of your organization as a result of your organization's relationship (arrangement) with _____ ?*

   Changes in College operations include involving the Consortium director in College meetings, and having her talk to administrators and faculty. The Vice President for Academic Affairs has been given an added responsibility. The relationship to the Mid-Ohio Consortium would show on a NCTC organization chart.

   The Consortium director said that the impact cannot be limited to NCTC alone. The operating procedures have evolved with input from members as a result of mutual need.

   b. *Have these been positive, beneficial changes?*

   Yes.

Extra Dimensions

1. *Critical Elements*

   a. *Are there unique or special factors that contributed to the success or problems in this relationship?*

   b. *What are the critical elements for success in the relationship?*

   The attitude and action of those in leadership positions.
   The support of the CEO which insures other College support.
   The conviction of the director of the Consortium.
   The Consortium director felt that mutual trust and honesty were by far the most important.

What is the relative importance of the following factors to your relationship?

1	*mutual benefits/exchanges*
3	*formal agreements* (distant third place)
2	*access to external resources or governance opportunities*
N/A	*mandates to collaborate*
_____	*(other)* _____

APPENDIX B

FEDAC SUBMISSION: SUPPORTING STATEMENT TO SF 83 ON "INTERAGENCY COOPERATION BETWEEN VOCATIONAL EDUCATION AND OTHER STATE AGENCIES"

FEDAC SUBMISSION

SUPPORTING STATEMENT
(SF 83, Rev. 4/83)

Interagency Cooperation Between Vocational Education and Other State Agencies

October 1983

The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

TABLE OF CONTENTS

		Page
A.	JUSTIFICATION	1
	1. Necessity for Data Collection	1
	2. Use of Information	3
	3. Use of Improved Information Technology	6
	4. Efforts to Identify Duplication	6
	5. Modification of Existing Data	9
	6. Burden on Small Business	10
	7. Consequences of Less Frequent Data Collection	10
	8. Compliance with 5 CFR 1320.6 Guidelines	10
	9. Consultation with Persons Outside of the Agency	10
	10. Confidentiality	11
	11. Sensitive Questions	11
	12. Estimates of Costs	12
	13. Respondent Burden	12
	14. Changes in Burden	12
	15. Tabulation, Statistical Analysis, Publication, and Project Time Schedule	12
B.	COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS	17
	1. Respondent Universe	17
	2. Procedure for the Collection of Information	17
	3. Methods to Maximize Response Rates	18
	4. Tests of Procedures	18
	5. Statistical Personnel/Consultant	18

Page

C. REFERENCES 19

D. APPENDIX SURVEY INSTRUMENTS 20

JUSTIFICATION

1. Necessity for Data Collection

The importance of cooperation among public sector agencies, both to increase effectiveness and decrease unnecessary duplication and cost, is widely recognized. Accordingly, a body of theory has developed--based largely on studies of interorganizational relations among public service agencies--and factors that promote or inhibit cooperative arrangements have been identified. Little attention has been given, however, to inter-organizational relations among public agencies that provide occupational training.

The need to better understand and promote local level inter-agency relations is especially great in view of the Job Training Partnership Act (PL 97-300), the success of which will largely depend on the effectiveness of state and local level inter-agency relations. The Act specifies that service providers shall be selected on the basis of demonstrated effectiveness.

> The primary consideration in selecting agencies or organizations to deliver services within a service delivery area shall be the effectiveness of the agency or organization in delivering comparable or related services based on demonstrated performance, in terms of the likelihood of meeting performance goals, cost, quality of training, and characteristics of participants.[1]

It also stresses the avoidance of duplication:

> Funds provided under this Act shall not be used to duplicate facilities or services available in the area (with or without reimbursement) from Federal,

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1. Job Training Partnership Act, Section 107(a)

> State, or local sources, unless it is demonstrated that alternative services or facilities would be more effective or more likely to achieve the service delivery area's performance goals.[1]

Obtaining the most effective training services without duplicating existing facilities or services requires coordination. Thus, coordination is one of the keys to the Job Training Partnership Act:

> Any state seeking financial assistance under this Act shall submit a Governor's coordination and special services plan for two program years to the Secretary describing the use of all resources provided to the State and its service delivery areas under this Act and evaluating the experience over the preceding two years.[2]

The Act prescribes separate state and local-level responsibilities. Selection of participants and of service providers is assigned to the local level, whereas overall program effectiveness is the responsibility of the state. Hence, coordination criteria are important.

> The plan shall establish criteria for coordinating activities under this Act (including title III) with programs and services provided by State and local education and training agencies (including vocational education agencies), public assistance agencies, the employment service, rehabilitation agencies, postsecondary institutions, economic development agencies, and such other agencies as the Governor determines to have a direct interest in employment and training and human resource utilization within the State. Such criteria shall not affect local discretion concerning the selection of eligible participants or service providers in accordance with the provisions of sections 107 and 203.[3]

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1. JTPA, Section 107(b)
2. JTPA, Section 121(a)(2)
3. JTPA, Section 121(b)(1)

The purpose of this study is to explore the extent to which current linkages between vocational education and other state-level agencies promote local level coordination. It is appropriate that the National Center conduct this research in view of its obligations under the law (Education Amendments of 1976, PL 94-482) which states that it shall

> conduct applied research and development on problems of national significance in vocational education and shall develop and provide information to facilitate national planning and policy development in vocational education.[1]

2. Use of Information

Studies indicate that public institutions providing vocational training at the local level are generally doing so without appreciable coordination.[2] A lack of motivation to exert the necessary effort to do otherwise appears to be the primary explanation for this, rather than conflict or competition. It has been suggested that more systematic incentives are needed that must come from the state/federal levels. Therefore, it is important to gather data that will indicate the nature of current state-level linkages between vocational education and related agencies, and the extent to which these linkages provide incentives for local level coordination. Such data will enable governmental agencies to better understand their role in bringing about improved coordination in the services of local providers.

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1. Section 171(a)(2)(A) and (D) of the Vocational Education Act of 1963, as amended by the Education Amendments of 1976.
2. Beder and Darkenwald, Occupational Education for Adults: An Analysis of Institutional Roles and Relationships, 1979, p.156.

This study will be based upon an eclectic model of Inter-Organizational Relations (IOR) developed by Van de Ven.[3,4] This model includes the following dimensional categories:

I. Situational factors

II. Structural dimensions

III. Process dimensions

Situational factors explain why IORs develop. Included are the following:

a. Resource dependence (an agency's need for external resources and/or other agencies in its environment).

b. Commitment to an external problem or opportunity (perceived commitment to resolve environmental needs or realize opportunities).

c. Awareness (knowledge of environmental needs, problems, or opportunities; knowledge of other agencies' goals and services; personal acquaintance of agency representatives).

d. Domain Consensus (agreement among agencies on (a) solutions to environmental needs or problems, and (b) services and goals of each).

Either resource dependence ("resource dependence model") or commitment to an external problem/opportunity ("system change model") is required for IOR to occur. In the former situation, the stimulus for IOR arises from within the organization; in the latter it comes from without (infusion of money from a resource granting agency, redistribution of resource allocation channels,

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1. Van de Ven, "On the Nature, Formation, and Maintenance of Relations Among Organizations," 1976.
2. Van de Ven, Walker, and Liston, "Coordination Problems Within and Interorganizational Network," 1979.

or other external intervention). In some situations, there are both elements present. In any case, awareness and consensus (as defined above) must also be present.

IORs, once established, generally have both structural and procedural dimensions. Structural dimensions refer to the administrative arrangements established to define the role relationships of the members in an IOR, and include the following:

a. Formalization (the degree to which rules, policies, and procedures govern both the inter-agency agreement and contacts).

b. Centralization (the locus of decision making; the degree of inclusive or concerted decision making by member agency representatives).

c. Complexity (number of differentiated elements--agencies' projects, tasks--that must be contended with and integrated in order for the IOR to function; for dyadic relations, this reduces to "multiplexity"--the number of linkages connecting the two agencies).

Process dimensions refer to the flow of activities that characterize the IOR. Structural arrangements should lead to such activities, but sometimes they do not. Hence it is not the structural dimensions, but the activities or processes of an IOR that indicate whether or not the IOR is functioning. Process dimensions include the following:

a. Resource flows (units of value transacted between agencies, e.g., money, facilities, materials, customer/client referrals, technical staff services). Resource flows have both intensity and direction.

b. Information flows (communication, whether written or oral, formal or informal). Information flows have both intensity and direction.

The structural and process characteristics of an IOR, taken together, can provide an indication of the intensity of the relationship.[1] This study will concentrate on situational factors and intensity of IORs at the state level, and on the effect of state level linkages on local-level counterpart agencies.

3. Use of Improved Information Technology

There will be a relatively small number of survey respondents (heads of approximately four state agencies in each of the states). However, use will be made of improved information technology, whenever feasible and appropriate, to facilitate the process of data collection.

4. Efforts to Identify Duplication

A number of databases have been searched in an effort to locate studies of linkage involving vocational education agencies. Empirical studies based upon interorganizational theory were particularly desired. Accordingly, descriptor terms such as interorganization, agency cooperation, models, and vocational education were used in various combinations to access the databases. Relevant entries since 1975, or earlier, were identified.

From the ERIC database, 152 entries since 1975 involving vocational education and interagency cooperation were identified. However, the majority of these did not concern either research or

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1. Klonglan et al., "Interorganizational Measurement in the Social Servies Sector: Differences by Hierarchical Level," 1976.

empirical studies. A substantial number of the entries involved CETA linkages. Excluding studies of CETA linkages, only two studies were found (reported in several entries) that gave insights into vocational education's interorganizational relationships specifically from the standpoint of interorganizational theory/concepts.

One is a recent study of linkages between institutions involved in adult occupational education, that concluded with the following observations:

> Much of the rhetoric calling for increased articulation among public educational institutions that provide adult occupational education is based on naive assumptions about organizational functioning. A significant increase in coordination and cooperation among public institutions cannot be expected in the absence of tangible incentives....Institutions cooperate with one-another only on the basis of a quid pro quo. Each must stand to gain significant benefits from the relationship. In general, incentives for articulation are either lacking or not recognized by local educational institutions.[1]

The study also drew conclusions concerning the role and functioning of state level adult education agencies relative to local service delivery.

> Articulation at the local level is unlikely to occur if state agencies responsible for adult occupational education fail to coordinate their own policymaking, programming and planning activities. In many states....coordinating and joint planning activities of the relevant state agencies are carried out perfunctorily and ineffectively.... State education departments....cannot confine their activities to planning, monitoring or program and staff development if greater articulation among institutional providers of adult occupational

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1. Beder and Darkenwald, Occupational Education for Adults: An Analysis of Institutional Roles and Relationships, 1979, p. 159.

> education is required. To effect change, state agencies must assume the less familiar roles of advocacy, brokerage and technical assistance.... Change in the status quo generally requires state agencies to assume a true leadership role: to inform, persuade, advise and assist.[1]

An exploratory study by the National Center for Research in Vocational Education of local level linkages between vocational education and related service deliverers bears out the same conclusions regarding the importance of incentives. It therefore is important to determine the extent of concern and advocacy on the part of corresponding agencies at the state level. By means of such a study, the extent of the problem can be determined, exemplary state level and state-local level relationships noted, and local level inter-agency relationships more effectively promoted.

Using "interorganization" as the key term for access, the NTIS database yielded 97 entries dating back to 1966. The majority of these entries concerned social service and health care agencies. Only a few of the reported studies were concerned with educational agencies at all. None were focused on vocational education.

Finally, the abstracts of dissertations since 1975 were searched for interorganizational themes. Of a total of 102 titles identified, nine concerned educational institutions of various kinds. Two of these concerned community colleges. None were focused on other providers of vocational education.

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1. Beder and Darkenwald, p. 159-161.

The paucity of these findings is consistent with the observations of researchers in the field of interorganizational behavior. Cates[1] observed, for example, that

> Although the field of interorganizational analysis is producing a rapidly growing body of literature, few studies have focused on arrangements among educational organizations.

More recently, Rogers and Whetten[2] confirm that

> . . . we have limited our research generally to social service agencies or business. Little systematic research has been conducted on relations among governmental bodies, educational institutions . . . (etc.). Public agencies are oftentimes mandated to interact with one another; by focusing our research primarily on these organizations, we greatly restrict our ability to generalize to the other types of organizations.

Finally, a number of descriptive studies of specific types of cooperation and linkage exist. Notable among these is a study of cooperation between secondary and post-secondary institutions involved in vocational/technical education, jointly sponsored by AACJC (American Association of Community and Junior Colleges) and AVA (American Vocational Association).[3]

5. Modification of Existing Data

The study by Beder and Darkenwald[4] is perhaps the most carefully carried out and most relevant to this subject of any that was found. It focused on adult programs--one part of the larger configuration of activities referred to as vocational or

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1. Cates, "An Exploration of Interorganization Arrangements in Education," 1979, p.5.
2. Rogers and Whetten, Interorganizational Coordination, 1982, p.107.
3. Bushnell, Education and Training: A Guide to Interinstitutional Cooperation, 1978.
4. Beder and Darkenwald, 1979.

occupational education. It can be described as an ecological study of the local-level delivery of adult vocational education, concerned with exploring and describing the system as a whole. The proposed study is to concentrate upon state-level relationships between vocational education and related agencies, and their correlation with local-level interagency functioning.

6. Burden on Small Business

Small businesses are not involved as providers of data.

7. Consequences of Less Frequent Data Collection

This is not a request for recurrent data collection. A one-time collection is proposed.

8. Compliance with 5 CFR 1320.6 Guidelines

There are no special circumstances that require the collection to be conducted in a manner inconsistent with 5 CFR 1320.6 guidelines.

9. Consultation with Persons Outside the Agency

Consultation with persons outside the National Center to obtain their views on interagency relationships involving vocational education, and on the availability of data, etc., has included the following:

David A. Whetten (217) 333-4160 (1983)
College of Business Administration, University of Illinois

Virginia C. Clay (419) 522-3411 (1983)
Mid-Ohio Consortium for Industrial Training

Henry Fallerius (419) 747-4999 (1983)
North Central Technical College (Mansfield, Ohio)

Robert B. Hadden (614) 235-7596 (1983)
Central Ohio Vocational-Technical Resource Consortium

10. Confidentiality

The project staff is solely responsible for the following phases of the survey research component of this study:

-- Research design

-- Development of instrumentation

-- Data collection

-- Report generation

The project will meet all needs for security in data collection and analysis so that no damage will be incurred by the study respondents.

The following data-handling procedures will be employed to protect respondents:

1. All processing of the data will be accomplished at the National Center by project staff members; only aggregate data will be reported.

2. All completed questionnaires will be destroyed or secured at the National Center upon completion of the project.

11. Sensitive Ouestions

The study is not concerned with the individual demographics of the respondents. Hence, there are no questions on matters commonly considered private, such as sexual and religious attitudes.

12. Estimates of Costs

The estimate of cost to collect and report the requested data is $60,000. This estimate includes the costs of letters of

explanation and introduction; conducting the telephone interviews (survey); and reducing, analyzing, and reporting the results.

13. Respondent Burden

The estimate of respondent burden is based on a one-time data collection using a single form, as follows:

number of respondents	200
hours per response	.50
total hours per administration	100
number of administrations	1
total burden hours	100

14. Changes in Burden

None.

15. Tabulation, Statistical Analysis, Publication, and Project Time Schedule

The plan of the study is to survey the heads of several agencies in each state to ascertain the strength of their interagency relationships. The agencies to be surveyed are the following:

a) State agency responsible for vocational education

b) State agency responsible for community colleges

c) State agency responsible for economic development

d) State agency responsible for vocational rehabilitation

The three dyads of interest to this study will be those between the vocational education agency and each of the remaining three agencies.

The study will attempt to answer the following general questions:

1) What are the relationships between the principal situational factors (interagency domain consensus and resource dependence) and the intensity of interagency cooperation?

2) What is the connection between agency interdependence at the state level, and state actions to promote cooperation at the local (service delivery) level?

These research questions are based upon the analytic model introduced above (Use of Information). Ouestions in the telephone interview protocol (see Appendix) relate to dimensions of the model as listed below. The first five questions concern inter-agency relations at the state level. Ouestions six, seven, and eight concern interagency relations at the local level. Ouestions nine and ten concern state-level initiatives to promote local-level cooperation.

Ouestion 1 - agency domain
2 - domain consensus
3 - domain dissensus
4 - resource dependence
5 - intensity of interagency relationship
6 - extent of local-level interagency collaboration
7 - strength of positive situational factors
8 - strength of negative situational factors
9 - state level actions to reduce negative situational factors at the local level
10 - state level actions to create positive situational factors at the local level

To understand the relationships of the two research questions, the perceptions of the agency heads, as elicited by the survey, will be organized into appropriate categories. The

definition of the categories is dependent upon the following sources of variation:

- o agreement on domain consensus
- o agreement on interdependency
- o interagency cooperative activities
- o presence of local incentives
- o presence of local disincentives
- o actions to reduce disincentives
- o actions to increase incentives

Before the categories are defined, a descriptive summary of the sample will be provided for each of the sources of variation. This summary will be in the form of frequency distribution and percentages for four groups of responses for each dyad. To illustrate, the groups for domain consensus are (1) agreement that there is low domain consensus, (2) agreement that there is moderate domain consensus, (3) agreement on high domain consensus, and (4) lack of agreement on domain consensus. This breakdown reflects the fact that the members of each dyad may not perceive the situation in the same way, and that such a lack of agreement may well result in variation in activity. This process will be repeated for interdependency, for the presence of local incentives and disincentives, and for the local actions taken. A scale will be developed to summarize the responses to the general question on interagency activities (question 5). It will reflect the increasing intensity of the listed activities.

The nature of the sample restricts its size to two hundred cases (four agency heads in fifty states). Therefore the analysis will be restricted to procedures that are appropriate for frequencies of the size that are possible within such a

sample. In addition to the frequency tabulations previously previously discussed, several cross tabulations will be presented. The general form will be as follows:

		Domain Consensus/Disagreement			
		Domain Consensus is low	Domain Consensus is moderate	Domain Consensus is high	Lack of Agreement
Interagency Activity	High				
	Medium				
	Low				

In addition to the domain/interagency activity cross-tabulations, others to be considered will be domain/dependency, domain/incentives, domain/local actions, and similar sets for dependency and interagency activity. A further type of analysis, descriptive in nature, will be computation of correlation coefficients between the scores of the vocational education member of the dyad on both the domain and dependency variables, and the interagency activity scores. Parallel analysis on these same pairs will be computed for the other three types of agencies. Differences in correlations, if any, will illuminate in an alternate way the presence of marked differences in perceptions among the agencies.

The significance of variations in frequency will be tested by methods utilizing the chi square distribution. Should logical

groupings of categories, with adequate frequencies in each cell, emerge from the data, a log-linear analysis of multiway tables will be considered. This procedure permits the assessment of the utility of the categorizing variables in accounting for the observed frequencies, and also provides an assessment of the significance of specific interactions. It requires, however, cell frequencies greater than zero in most cells. This condition may not be met by a limited sample size with many explanatory variables.

The time schedule for the project is as follows:

Event	Date
Submission to FEDAC	11/7/83
Begin data collection	5/1/84
End data collection	6/22/84
Data analysis completed	8/31/84
Report camera-ready	10/31/84

COLLECTION OF INFORMATION EMPLOYING
STATISTICAL METHODS

1. Respondent Universe

The desired respondents are persons who can best represent the policy of one (or more) of the following state level agencies:

1) vocational education
2) community colleges
3) economic development
4) vocational rehabilitation

In most cases, the respondent is expected to be the agency head. Information is needed from all states and the entire population of potential respondents. Therefore a sampling plan is not involved. Hence, there are approximately 200 potential respondents. A response rate of approximately 95% is anticipated.

2. Procedure for the Collection of Information

Data will be collected by means of telephone interviews with each of the approximately 200 potential respondents. The procedure for data collection will consist of the following steps:

1. A letter will be sent to all potential respondents to briefly explain the purpose of the survey, and to inform respondents that a phone call to arrange an appointment will follow shortly.
2. A phone call will be made to arrange a mutually agreeable time for the telephone interview.
3. The telephone interview will be carried out at the appointed time.
4. Follow-up arrangements will be made, as necessary, for appointments that could not be met.

3. Methods to Maximize Response Rates

The procedure described above should provide a very high response rate (approximately 95%) because all arrangements for data collection will be made individually.

4. Tests of Procedures

The opinions of less than ten persons will be sought concerning the understandability and ease of response to the interview protocol items.

5. Statistical Personnel/Consultants

Paul Campbell and John Gardner (1-800-848-4815), staff members of the National Center's Evaluation and Policy Division have and will be consulted on the statistical aspects of the design. Data will be collected and analyzed by other members of the Evaluation and Policy Division.

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APPENDIX

SURVEY INSTRUMENTS

The two instruments included here are interview protocols that are identical with regard to questions asked. They differ only with regard to structure. Thus, vocational education agencies are asked to respond with respect to each of three other agencies, whereas the three other agencies will each respond only with respect to the vocational education agency.

Protocol A is the instrument to be used to interview heads of non-vocational-education agencies concerning interagency relations with the vocational education agency. Protocol B will be used to interview vocational education agency heads concerning interagency relations with each of the other agencies.

PROTOCOL "A"

THE NATIONAL CENTER
FOR RESEARCH IN VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY
1960 KENNY ROAD · COLUMBUS, OHIO 43210

Instructions to interviewer: These questions are asked to determine the importance of state level relationships between vocational education and selected other agencies, in carrying out their respective roles and functions. The selected other agencies are those having state-level oversight of one of the following:

(a) community colleges
(b) economic development
(c) vocational rehabilitation

Because of differences in state organizations and agency titles, the state vocational education agency will be referred to in this questionnaire as the SDVE.

The questions in this protocol are to be addressed to the head of each of the agencies (a to c) listed above, or someone designated by the agency head as being equally able to represent agency policy.

Information on respondent:

Name _____

Position _____

Agency represented _____

State _____ Phone number _____

Interviewer _____

Date of interview _____

1. What are your agency's principal roles and functions as prescribed by law, executive order, etc.?

[ ] training [ ] placement

[ ] personal assessment [ ] counseling

[ ] _____

[ ] _____

Who are your principal clients among individuals and agencies? Please specify eligibility requirements and services provided for each of the following categories of clients.

Individuals: Services/eligibility

[ ] youth (under 18) _____

_____

[ ] young adults (18-25) _____

_____

[ ] adults _____

_____

Agencies/institutions:

[ ] employers _____

_____

[ ] CBOs _____

_____

[ ] schools _____

_____

[ ] (other) _____

Do you have printed materials (e.g., brochures) that you can send us to supplement this information on agency functions, clients, and services?

[ ] Yes [ ] No

The following questions concern interagency relations at the state level.

2. In the previous question, you have identified your agency's area of operations in terms of functions, clients and services. Now, consider also the SDVE's area of operations, as you understand them. To what extent is there agreement between your two agencies concerning your respective areas of operation?

   Extent of agreement:

   1 - none/not at all

   2 - slight

   3 - moderate

   4 - considerable

   5 - very great

3. Are there some areas of disagreement concerning your respective areas of operation?

   [ ] Yes [ ] No (go to question 4)

   Briefly describe them _____

   _____

   To what extent does disagreement over this issue characterize your relationship with SDVE?

   Extent of disagreement:

   1 - none/not at all

   2 - slight

   3 - moderate

   4 - considerable

   5 - very great

4. In which of the following ways does the SDVE support you?

(Type of support)		(Rank)
[ ]	funds	[ ]
[ ]	personnel/services	[ ]
[ ]	facilities/equipment	[ ]
[ ]	information	[ ]
[ ]	_____	[ ]
[ ]	We receive no support from the SDVE (go to question 5)	

Please rank order the kinds of support that you receive, according to their importance to you.

How dependent upon the SDVE are you, at present, in carrying out your agency's operations?

Dependency

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

5. The following questions refer to various aspects of your agency's relations with the SDVE.

a. Are you acquainted with the head of the SDVE?

[ ] Yes [ ] No

b. Have you met with the head of the SDVE at any time during the past year to discuss the activities of your respective agencies?

[ ] Yes [ ] No (go to question 5c)

How often do you meet formally (regular committee meetings, etc.)?

[ ] never

[ ] weekly

[ ] monthly

[ ] _____

How often do you meet informally?

[ ] never

[ ] weekly

[ ] monthly

[ ] _____

c. Are you on SDVE's mailing list to receive newsletters, annual reports, or other information releases?

[ ] Yes [ ] No (go to question 5d)

How often do you receive such material?

[ ] daily

[ ] weekly

[ ] monthly

[ ] _____

d. Has the SDVE shared, loaned, or provided resources such as meeting rooms, pesonnel, equipment, or funds at any time during the last three years?

[ ] Yes [ ] No
(go to question 5e)

How often have you received the use of the following resources?

	(1) Never	(2) Infrequently	(3) Frequently	(4) Continuously
funds*				
personnel**				
facilities				
equipment				
other:				

_____

_____

*If funds are received "frequently" or "continuously," what is the average annual value? _____

**If personnel services are received "frequently" or "continuously," what are their positions and the equivalent months per year of their service?

Position (1) _____ months/years _____

(2) _____ _____

e. Does anyone from the SDVE serve on any of your agency's boards, councils, or committees?

[ ] Yes [ ] No (go to question 5f)

Which of the following describe the type of SDVE membership and participation? (Check all that apply)

[ ] advisory

[ ] policy/governing

[ ] evaluative

[ ] _____

f. Within the last three years, has your agency worked jointly in planning and implementing any specific programs or activities with SDVE?

[ ] Yes [ ] No (go to question 5g)

What was the nature of this joint activity?

[ ] planning [ ] implementing

[ ] monitoring [ ] assessing

[ ] _____ [ ] _____

g. Does your agency have any written agreements with the SDVE?

[ ] Yes [ ] No
(go to question 6)

What areas of activity do they concern? (Check all that apply)

[ ] personnel commitments

[ ] client referrals

[ ] procedures for working together

[ ] _____

Would you be willing to send copies/samples of these documents to us?

[ ] Yes [ ] No

The previous questions have dealt with relationships between state-level agencies. The following questions concern the state agency's perceptions of relations between its local-level agencies and local-level vocational education.

6. How would you characterize the extent of collaboration, state-wide, between local-level operations of your agency and those of vocational education?

Extent of collaboration:

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

(If response is less than 3 go to question 7)

What is/are the typical kinds of interagency collaboration at the local level?

[ ] information sharing

[ ] resource sharing

[ ] client referral

[ ] joint program planning

[ ] joint program operation

[ ] _____

7. To what extent, at present, is there <u>incentive</u> for local-level interagency collaboration?

Extent of incentive:

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

(If response is less than 3, go to question 8)

Which of the following incentives are typical of local-level interagency collaboration?

[ ] legislative mandate

[ ] state policy

[ ] community pressure

[ ] access to additional resources

[ ] _____

8. To what extent, at present, is there disincentive for local-level interagency collaboration?

Extent of disincentive:

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

(If response is "none/not at all," go to question 9)

Which of the following disincentives to collaborate are typically present at the local level?

[ ] competition for resources/support/turf

[ ] conflicting philosophies

[ ] conflicting personalities/attitudes

[ ] conflicting agency policy/procedures

[ ] perceived negative benefit - cost

[ ] _____

9. Have you taken action at the state level during the past three years to reduce local-level disincentives?

[ ] Yes [ ] No (go to question 10)

What actions have been taken to reduce disincentives?

[ ] revised state agency procedures that were in conflict

[ ] formulated policy to reduce overlapping roles and functions.

[ ] _____

10. Have you taken action at the state level during the past three years to provide local-level incentives?

[ ] Yes (continue) [ ] No (concludes the interview)

What actions have been taken to provide incentives?

[ ] supported legislation requiring inter-agency collaboration

[ ] provided funding incentives

[ ] sponsored workshops to promote communication, explain benefits of collaboration to local interagency personnel

[ ] issued joint policy statement in support of greater local collaboration

[ ] _____

PROTOCOL "B"

THE NATIONAL CENTER
FOR RESEARCH IN VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY
1960 KENNY ROAD · COLUMBUS, OHIO 43210

Instructions to interviewer: These questions are asked to determine the importance of state level relationships between vocational education and selected other agencies, in carrying out their respective roles and functions. The selected other agencies are those having state-level oversight of one of the following:

(a) community colleges
(b) economic development
(c) vocational rehabilitation

Because of differences in state organizations and agency titles, the state vocational education agency will be referred to in this questionnaire as the SDVE.

The questions in this protocol are to be addressed to the head of the SDVE, or someone designated by the agency head as being equally able to represent SDVE policy.

Information on respondent:

Name _____

Position _____

Agency represented _____

State _____ Phone number _____

Interviewer _____

Date of interview _____

1. What are your agency's principal roles and functions as prescribed by law, executive order, etc.?

[ ] training [ ] placement

[ ] personal assessment [ ] counseling

[ ] _____

[ ] _____

Who are your principal clients among individuals and agencies? Please specify eligibility requirements and services provided for each of the following categories of clients.

Individuals: Services/eligibility

[ ] youth (under 18) _____

_____

[ ] young adults (18-25) _____

_____

[ ] adults _____

_____

Agencies/institutions:

[ ] employers _____

_____

[ ] CBOs _____

_____

[ ] schools _____

_____

[ ] (other) _____

Do you have printed materials (e.g., brochures) that you can send us to supplement this information on agency functions, clients, and services?

[ ] Yes [ ] No

The remainder of this interview consists of a single set of questions which is repeated for each interagency pair. The SDVE representative will be asked the same set of questions with respect to the SDVE interagency relationship with each of the following agencies, in the order shown:

(1) state-level community college agency

(2) state-level vocational rehabilitation agency

(3) state-level economic development agency

The following questions concern interagency relations at the state level.

2. In the previous question, you have identified your agency's area of operations in terms of functions, clients and services. Now, consider also the community college agency's area of operations, as you understand them. To what extent is there agreement between your two agencies concerning your respective areas of operation?

   Extent of agreement:

   1 - none/not at all

   2 - slight

   3 - moderate

   4 - considerable

   5 - very great

3. Are there some areas of disagreement concerning your respective areas of operation?

   [ ] Yes [ ] No (go to question 4)

   Briefly describe them _____

   _____

   To what extent does disagreement over this issue characterize your relationship with the community college agency

   Extent of disagreement:

   1 - none/not at all

   2 - slight

   3 - moderate

   4 - considerable

   5 - very great

4. In which of the following ways does the community college agency support you?

(Type of support)		(Rank)
[ ]	funds	[ ]
[ ]	personnel/services	[ ]
[ ]	facilities/equipment	[ ]
[ ]	information	[ ]
[ ]	_____	[ ]
[ ]	We receive no support from the community college agency (go to question 5)	

Please rank order the kinds of support that you receive, according to their importance to you.

How dependent upon the community college agency are you, at present, in carrying out your agency's operations?

Dependency

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

5. The following questions refer to various aspects of your agency's relations with the community college agency.

a. Are you acquainted with the head of the community college agency?

[ ] Yes [ ] No

b. Have you met with the head of the community college agency at any time during the past year to discuss the activities of your respective agencies?

[ ] Yes [ ] No (go to question 5c)

How often do you meet formally (regular committee meetings, etc.)?

[ ] never

[ ] weekly

[ ] monthly

[ ] _____

How often do you meet informally?

[ ] never

[ ] weekly

[ ] monthly

[ ] _____

c. Are you on the community college agency's mailing list to receive newsletters, annual reports, or other information releases?

[ ] Yes [ ] No (go to question 5d)

How often do you receive such material?

[ ] daily

[ ] weekly

[ ] monthly

[ ] _____

d. Has the community college agency shared, loaned, or provided resources such as meeting rooms, pesonnel, equipment, or funds at any time during the last three years?

[ ] Yes [ ] No
(go to question 5e)

How often have you received the use of the following resources?

	(1) Never	(2) Infrequently	(3) Frequently	(4) Continuously
funds*				
personnel**				
facilities				
equipment				
other:				

_____

_____

*If funds are received "frequently" or "continuously," what is the average annual value? _____

**If personnel services are received "frequently" or "continuously," what are their positions and the equivalent months per years of their service?

Position (1) _____ months/years _____

(2) _____ _____

e. Does anyone from the community college agency serve on any of your agency's boards, councils, or committees?

[ ] Yes [ ] No (go to question 5f)

Which of the following describe the type of the community college agency membership and participation? (Check all that apply)

[ ] advisory

[ ] policy/governing

[ ] evaluative

[ ] _____

f. Within the last three years, has your agency worked jointly in planning and implementing any specific programs or activities with the community college agency?

[ ] Yes [ ] No (go to question 5g)

What was the nature of this joint activity?

[ ] planning [ ] implementing

[ ] monitoring [ ] assessing

[ ] _____ [ ] _____

g. Does your agency have any written agreements with the the community college agency?

[ ] Yes [ ] No
(go to question 6)

What areas of activity do they concern? (Check all that apply)

[ ] personnel commitments

[ ] client referrals

[ ] procedures for working together

[ ] _____

Would you be willing to send copies/samples of these documents to us?

[ ] Yes [ ] No

The previous questions have dealt with relationships between state-level agencies. The following questions concern the state agency's perceptions of relations between its local-level agencies and local-level vocational education.

6. How would you characterize the extent of collaboration, state-wide, between local-level vocational education and the local level operations of the community college agency?

Extent of collaboration:

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

(If response is less than 3 go to question 7)

What is/are the typical kinds of interagency collaboration at the local level?

[ ] information sharing

[ ] resource sharing

[ ] client referral

[ ] joint program planning

[ ] joint program operation

[ ] _____

7. To what extent, at present, is there incentive for local-level interagency collaboration?

Extent of incentive:

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

(If response is less than 3, go to question 8)

Which of the following incentives are typical of local-level interagency collaboration?

[ ] legislative mandate

[ ] state policy

[ ] community pressure

[ ] access to additional resources

[ ] _____

8. To what extent, at present, is there disincentive for local-level interagency collaboration?

Extent of disincentive:

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

(If response is "none/not at all," go to question 9)

Which of the following disincentives to collaborate are typically present at the local level?

[ ] competition for resources/support/turf

[ ] conflicting philosophies

[ ] conflicting personalities/attitudes

[ ] conflicting agency policy/procedures

[ ] perceived negative benefit - cost

[ ] _____

9. Have you taken action at the state level during the past three years to reduce local-level disincentives?

[ ] Yes [ ] No (go to question 10)

What actions have been taken to reduce disincentives?

[ ] revised state agency procedures that were in conflict

[ ] formulated policy to reduce overlapping roles and functions.

[ ] _____

10. Have you taken action at the state level during the past three years to provide local-level incentives?

[ ] Yes (continue)

[ ] No (concludes the interview concerning this agency)

What actions have been taken to provide incentives?

[ ] supported legislation requiring inter-agency collaboration

[ ] provided funding incentives

[ ] sponsored workshops to promote communication, explain benefits of collaboration to local interagency personnel

[ ] issued joint policy statement in support of greater local collaboration

[ ] _____

This concludes the interview concerning the community college agency. Continue until the interviews concerning all three related agencies have been completed.

The following questions concern interagency relations at the state level.

2. In the previous question, you have identified your agency's area of operations in terms of functions, clients and services. Now, consider also the vocational rehabilitation agency's area of operations, as you understand them. To what extent is there agreement between your two agencies concerning your respective areas of operation?

   Extent of agreement:

   1 - none/not at all

   2 - slight

   3 - moderate

   4 - considerable

   5 - very great

3. Are there some areas of disagreement concerning your respective areas of operation?

   [ ] Yes [ ] No (go to question 4)

   Briefly describe them _____

   _____

   To what extent does disagreement over this issue characterize your relationship with the vocational rehabilitation agency?

   Extent of disagreement:

   1 - none/not at all

   2 - slight

   3 - moderate

   4 - considerable

   5 - very great

4. In which of the following ways does the vocational rehabilitation agency support you?

(Type of support)		(Rank)
[ ]	funds	[ ]
[ ]	personnel/services	[ ]
[ ]	facilities/equipment	[ ]
[ ]	information	[ ]
[ ]	_____	[ ]
[ ]	We receive no support from the vocational rehabilitation agency (go to question 5)	

Please rank order the kinds of support that you receive, according to their importance to you.

How dependent upon the vocational rehabilitation agency are you, at present, in carrying out your agency's operations?

Dependency

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

5. The following questions refer to various aspects of your agency's relations with the vocational rehabilitation agency.

a. Are you acquainted with the head of the vocational rehabilitation agency?

[ ] Yes [ ] No

b. Have you met with the head of the vocational rehabilitation agency at any time during the past year to discuss the activities of your respective agencies?

[ ] Yes [ ] No (go to question 5c)

How often do you meet formally (regular committee meetings, etc.)?

[ ] never

[ ] weekly

[ ] monthly

[ ] _____

How often do you meet informally?

[ ] never

[ ] weekly

[ ] monthly

[ ] _____

c. Are you on the vocational rehabilitation agency's mailing list to receive newsletters, annual reports, or other information releases?

[ ] Yes [ ] No (go to question 5d)

How often do you receive such material?

[ ] daily

[ ] weekly

[ ] monthly

[ ] _____

d. Has the vocational rehabilitation agency shared, loaned, or provided resources such as meeting rooms, pesonnel, equipment, or funds at any time during the last three years?

[ ] Yes [ ] No
(go to question 5e)

How often have you received the use of the following resources?

	(1) Never	(2) Infrequently	(3) Frequently	(4) Continuously
funds*				
personnel**				
facilities				
equipment				
other:				

_____

_____

*If funds are received "frequently" or "continuously," what is the average annual value? _____

**If personnel services are received "frequently" or "continuously," what are their positions and the equivalent months per years of their service?

Position (1) _____ months/years _____

(2) _____ _____

e. Does anyone from the vocational rehabilitation agency serve on any of your agency's boards, councils, or committees?

[ ] Yes [ ] No (go to question 5f)

Which of the following describe the type of the vocational rehabilitation agency membership and participation? (Check all that apply)

[ ] advisory

[ ] policy/governing

[ ] evaluative

[ ] _____

f. Within the last three years, has your agency worked jointly in planning and implementing any specific programs or activities with the vocational rehabilitation agency?

[ ] Yes [ ] No (go to question 5g)

What was the nature of this joint activity?

[ ] planning [ ] implementing

[ ] monitoring [ ] assessing

[ ] _____ [ ] _____

g. Does your agency have any written agreements with the vocational rehabilitation agency?

[ ] Yes [ ] No
(go to question 6)

What areas of activity do they concern? (Check all that apply)

[ ] personnel commitments

[ ] client referrals

[ ] procedures for working together

[ ] _____

Would you be willing to send copies/samples of these documents to us?

[ ] Yes [ ] No

The previous questions have dealt with relationships between state-level agencies. The following questions concern the state agency's perceptions of relations between its local-level agencies and local-level vocational education.

6. How would you characterize the extent of collaboration, state-wide, between local-level vocational education and the local-level operations of the vocational rehabilitation agency ?

Extent of collaboration:

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

(If response is less than 3 go to question 7)

What is/are the typical kinds of interagency collaboration at the local level?

[ ] information sharing

[ ] resource sharing

[ ] client referral

[ ] joint program planning

[ ] joint program operation

[ ] _____

7. To what extent, at present, is there <u>incentive</u> for local-level interagency collaboration?

Extent of incentive:

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

(If response is less than 3, go to question 8)

Which of the following incentives are typical of local-level interagency collaboration?

[ ] legislative mandate

[ ] state policy

[ ] community pressure

[ ] access to additional resources

[ ] _____

8. To what extent, at present, is there disincentive for local-level interagency collaboration?

Extent of disincentive:

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

(If response is "none/not at all," go to question 9)

Which of the following disincentives to collaborate are typically present at the local level?

[ ] competition for resources/support/turf

[ ] conflicting philosophies

[ ] conflicting personalities/attitudes

[ ] conflicting agency policy/procedures

[ ] perceived negative benefit - cost

[ ] _____

9. Have you taken action at the state level during the past three years to reduce local-level disincentives?

[ ] Yes [ ] No (go to question 10)

What actions have been taken to reduce disincentives?

[ ] revised state agency procedures that were in conflict

[ ] formulated policy to reduce overlapping roles and functions.

[ ] _____

10. Have you taken action at the state level during the past three years to provide local-level incentives?

[ ] Yes (continue)

[ ] No (concludes the interview concerning this agency)

What actions have been taken to provide incentives?

[ ] supported legislation requiring inter-agency collaboration

[ ] provided funding incentives

[ ] sponsored workshops to promote communication, explain benefits of collaboration to local interagency personnel

[ ] issued joint policy statement in support of greater local collaboration

[ ] _____

This concludes the interview concerning the vocational rehabilitation agency. Continue until the interviews concerning all three related agencies have been completed.

The following questions concern interagency relations at the state level.

2. In the previous question, you have identified your agency's area of operations in terms of functions, clients and services. Now, consider also the economic development agency's area of operations, as you understand them. To what extent is there agreement between your two agencies concerning your respective areas of operation?

   Extent of agreement:

   1 - none/not at all

   2 - slight

   3 - moderate

   4 - considerable

   5 - very great

3. Are there some areas of disagreement concerning your respective areas of operation?

   [ ] Yes [ ] No (go to question 4)

   Briefly describe them _____

   _____

   To what extent does disagreement over this issue characterize your relationship with the economic development agency?

   Extent of disagreement:

   1 - none/not at all

   2 - slight

   3 - moderate

   4 - considerable

   5 - very great

4. In which of the following ways does the economic development agency support you?

(Type of support)		(Rank)
[ ]	funds	[ ]
[ ]	personnel/services	[ ]
[ ]	facilities/equipment	[ ]
[ ]	information	[ ]
[ ]	_____	[ ]
[ ]	We receive no support from the economic development agency (go to question 5)	

Please rank order the kinds of support that you receive, according to their importance to you.

How dependent upon the economic development agency are you, at present, in carrying out your agency's operations?

Dependency

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

5. The following questions refer to various aspects of your agency's relations with the economic development agency.

a. Are you acquainted with the head of the economic development agency?

[ ] Yes [ ] No

b. Have you met with the head of the economic development agency at any time during the past year to discuss the activities of your respective agencies?

[ ] Yes [ ] No (go to question 5c)

How often do you meet formally (regular committee meetings, etc.)?

[ ] never

[ ] weekly

[ ] monthly

[ ] _____

How often do you meet informally?

[ ] never

[ ] weekly

[ ] monthly

[ ] _____

c. Are you on the economic development agency's mailing list to receive newsletters, annual reports, or other information releases?

[ ] Yes [ ] No (go to question 5d)

How often do you receive such material?

[ ] daily

[ ] weekly

[ ] monthly

[ ] _____

d. Has the economic development agency shared, loaned, or provided resources such as meeting rooms, pesonnel, equipment, or funds at any time during the last three years?

[ ] Yes [ ] No
(go to question 5e)

How often have you received the use of the following resources?

	(1) Never	(2) Infrequently	(3) Frequently	(4) Continuously
funds*				
personnel**				
facilities				
equipment				
other:				

_____

_____

*If funds are received "frequently" or "continuously," what is the average annual value? _____

**If personnel services are received "frequently" or "continuously," what are their positions and the equivalent months per years of their service?

Position (1) _____ months/years _____

(2) _____ _____

e. Does anyone from the economic development agency serve on any of your agency's boards, councils, or committees?

[ ] Yes [ ] No (go to question 5f)

Which of the following describe the type of the economic development agency membership and participation? (Check all that apply)

[ ] advisory

[ ] policy/governing

[ ] evaluative

[ ] _____

f. Within the last three years, has your agency worked jointly in planning and implementing any specific programs or activities with the economic development agency?

[ ] Yes [ ] No (go to question 5g)

What was the nature of this joint activity?

[ ] planning [ ] implementing

[ ] monitoring [ ] assessing

[ ] _____ [ ] _____

g. Does your agency have any written agreements with the economic development agency?

[ ] Yes [ ] No
(go to question 6)

What areas of activity do they concern? (Check all that apply)

[ ] personnel commitments

[ ] client referrals

[ ] procedures for working together

[ ] _____

Would you be willing to send copies/samples of these documents to us?

[ ] Yes [ ] No

The previous questions have dealt with relationships between state-level agencies. The following questions concern the state agency's perceptions of relations between its local-level agencies and local-level vocational education.

6. How would you characterize the extent of collaboration, state-wide, between local-level vocational education and the local-level operations of the economic development agency?

Extent of collaboration:

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

(If response is less than 3 go to question 7)

What is/are the typical kinds of interagency collaboration at the local level?

[ ] information sharing

[ ] resource sharing

[ ] client referral

[ ] joint program planning

[ ] joint program operation

[ ] _____

7. To what extent, at present, is there <u>incentive</u> for local-level interagency collaboration?

Extent of incentive:

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

(If response is less than 3, go to question 8)

Which of the following incentives are typical of local-level interagency collaboration?

[ ] legislative mandate

[ ] state policy

[ ] community pressure

[ ] access to additional resources

[ ] _____

8. To what extent, at present, is there disincentive for local-level interagency collaboration?

Extent of disincentive:

1 - none/not at all

2 - slight

3 - moderate

4 - considerable

5 - very great

(If response is "none/not at all," go to question 9)

Which of the following disincentives to collaborate are typically present at the local level?

[ ] competition for resources/support/turf

[ ] conflicting philosophies

[ ] conflicting personalities/attitudes

[ ] conflicting agency policy/procedures

[ ] perceived negative benefit - cost

[ ] _____

9. Have you taken action at the state level during the past three years to reduce local-level disincentives?

[ ] Yes [ ] No (go to question 10)

What actions have been taken to reduce disincentives?

[ ] revised state agency procedures that were in conflict

[ ] formulated policy to reduce overlapping roles and functions.

[ ] _____

10. Have you taken action at the state level during the past three years to provide local-level incentives?

[ ] Yes (continue)

[ ] No (concludes the interview concerning this agency)

What actions have been taken to provide incentives?

[ ] supported legislation requiring inter-agency collaboration

[ ] provided funding incentives

[ ] sponsored workshops to promote communication, explain benefits of collaboration to local interagency personnel

[ ] issued joint policy statement in support of greater local collaboration

[ ] _____